THE LIBRARY ASSOCIATION
RECEIVED
AUG 2 1913
OF PORTLAND.

THE PACIFIC COAST ARCHITECT

A·MONTHLY·JOURNAL·FOR·THE ARCHITECTURAL · INTERESTS

SAN FRANCISCO
CALIFORNIA

VOLUME FIVE
NUMBER FOUR

JULY, 1913

GLADDING McBEAN & COMPANY

Architectural
Terra Cotta
Face Brick

OFFICE
Crocker Building, - San Francisco

FACTORY
Lincoln, California

W. P. FULLER & CO.

Art Glass

AGENTS FOR
Imperial Prism-Plate
Ornamental Glass

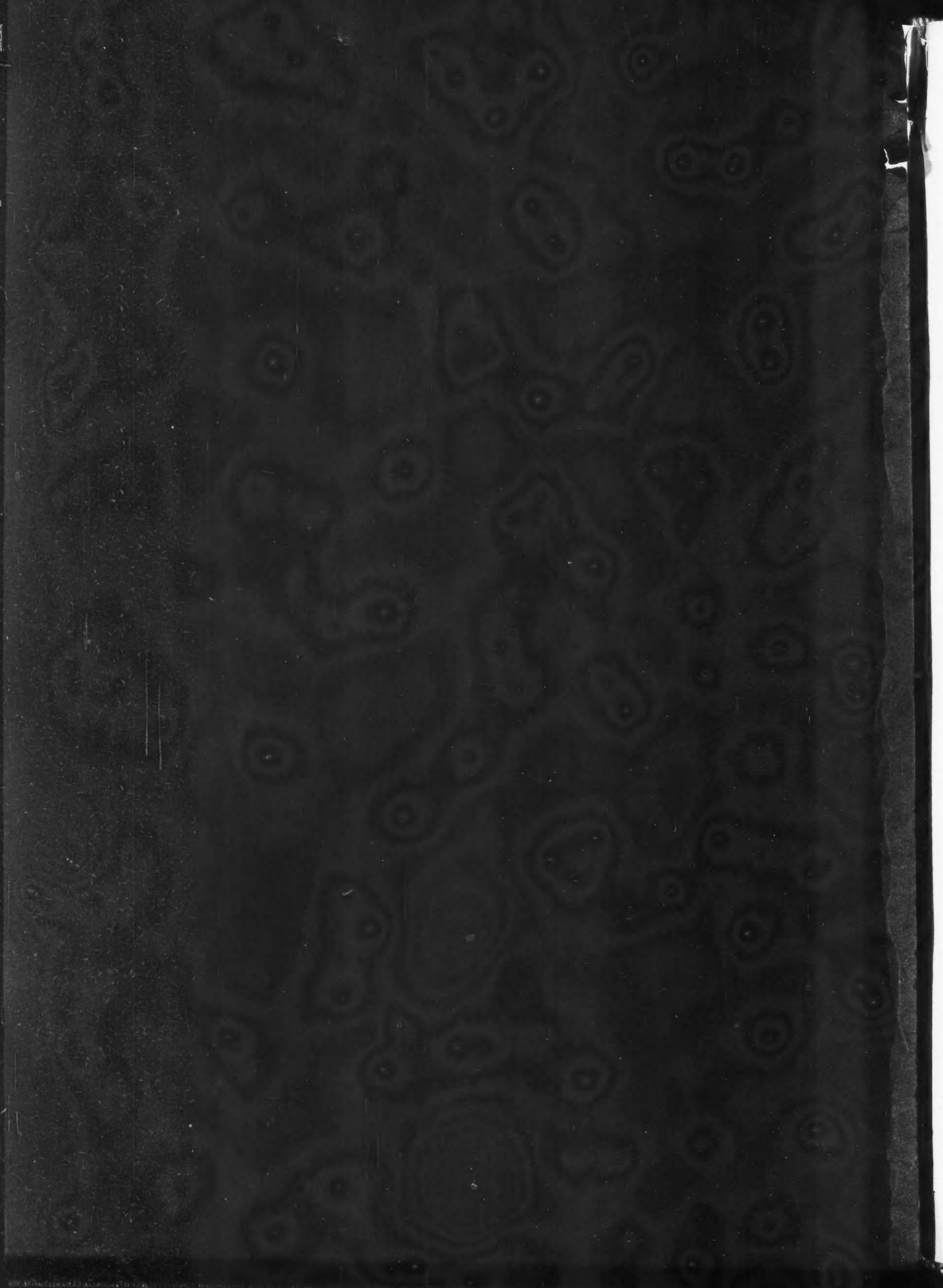
TWELFTH AND DAVIS STREETS

Phones: Main 7000; A-6041

THIS MAGAZINE WAS PRINTED BY

Shannon-Conmy Printing Co.

509 Sansome Street San Francisco



Congress Hotel

SIXTH AND MAIN STREETS
PORTLAND, OREGON

D. L. WILLIAMS, ARCHITECT

Faced With

PLASTIC WHITE BRICK

TEST PROVES "PACIFIC" BEST

Furnished by

Pacific Face Brick Co.

Portland, Oregon.

THE ONLY GRAND PRIZE

At the ALASKA-YUKON EXPOSITION was
Awarded to the Tested, Time-Tried and Reliable

WICKES REFRIGERATORS

MOST ELEGANT REFRIGERATORS EVER PRODUCED

OAK AND TILE EXTERIOR
FOOD COMPARTMENT LINED WITH OPAL GLASS
"BETTER THAN MARBLE"
ECONOMY IN ICE
PERFECT CIRCULATION
THE GREAT SANITARY REFRIGERATOR

Wickes Refrigerators compare favorably in every point specified in article which appeared in the Pacific Coast Architect, November, 1911.

THE BRUNSWICK BALKE COLLENDER CO.
WICKES

STANDARD SIZES ALWAYS IN STOCK
FOR IMMEDIATE DELIVERY
OTHER SIZES MADE TO ORDER

In Use in many of the Best Apartment Houses, Clubs, Hotels, Restaurants, Public Institutions, Hospitals and Homes in the United States.

Call, Phone or Write for High Art Catalog

FROM MANUFACTURER TO USER, THEREBY SAVING MIDDLEMAN'S PROFIT

WICKES REFRIGERATORS ARE GUARANTEED BY

THE BRUNSWICK - BALKE - COLLENDER CO.

PORTLAND, SEATTLE AND SPOKANE BRANCHES

Tenino Cut Stone

DESIGNS OF EVERY DESCRIPTION

Fireplaces **Sawed Slabs** **Rubble**

"GOOD WORKMANSHIP—PROMPT DELIVERY"
Our Slogan

Women of Woodcraft Building, Portland, Ore.
ALL TENINO STONE
E. W. Hendricks, Architect.

There is sure to be positive dissatisfaction, to say nothing of greater cost, in the use of a foreign stone the beauty of which is soon marred by disfiguring stains.

TENINO STONE is a native product with all the qualities necessary to a good building stone. It holds its color better than any foreign stone and, after a few years wear, it can be cleaned down and made fresh and new by the use of our approved cleaning solution at a trifling cost. Its liberal use in Schools, Churches, Banks, Court Houses, Federal Buildings, Lodges and Residences has proven its worth.

Write for catalogue and estimate.

TENINO STONE COMPANY, Inc.
Tenino, Wash.

Quarry, Cutting Plant and General Office, Tenino, Phone 101
Portland Office, Main 1406 Seattle Office, East 1529
Vancouver, B. C., Office, Seymour 4631

BUILDING MATERIALS

CONTRACTOR'S SUPPLIES

In building and construction work, our catalogs and other information will interest you. We have a line of recognized standards and specialties worthy of investigation.

F. T. CROWE & CO.
SEATTLE, PORTLAND, TACOMA, SPOKANE

BRONZE

Lamps
Memorial Tablets
Bank Grilles
Bank Entrance Doors

Correspondence Invited

SPOKANE ORNAMENTAL IRON AND WIRE WORKS

PORTLAND, OREGON
802 Lewis Building

SPOKANE, WASH.

VANCOUVER, B. C.
815 Metropolitan Building

THE TIME TO GO EAST

IS WHILE THE FARES ARE **LEAST**

VIA

Remember — OREGON-WASHINGTON RAILROAD & NAVIGATION CO. (UNION PACIFIC OVERLAND) — *Block Signals*

Unusually Liberal Stop-Over Privileges

In Connection with Low Round Trip Excursion Fares to Chicago, New York Boston, Philadelphia, Denver, Omaha or most anywhere

LET US TELL YOU OF THESE ADVANTAGES

Uniformed Agent Meets All Trains and Looks Out for Your Comfort

City Ticket Office Third and Washington Sts. Phones Marshall 4500 and A-6121

Telephones
S. F. KEARNY 2830
FACTORY ALAMEDA 509

N. Clark & Sons

Incorporated Jan. 11, 1889

MANUFACTURERS OF

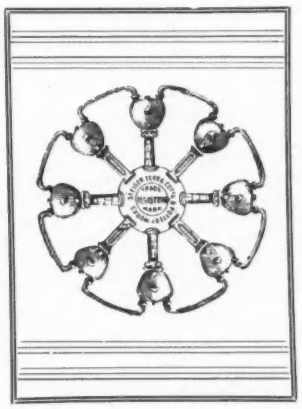
Architectural Terra Cotta
Pressed Brick
Vitrified and Terra Cotta Pipe
Hollow Tile Fire Proofing
Fire Brick Tile and
Kindred Clay Products

Works: WEST ALAMEDA

Office:

112-116 Natoma Street San Francisco

STEIGER
TERRA COTTA AND POTTERY WORKS

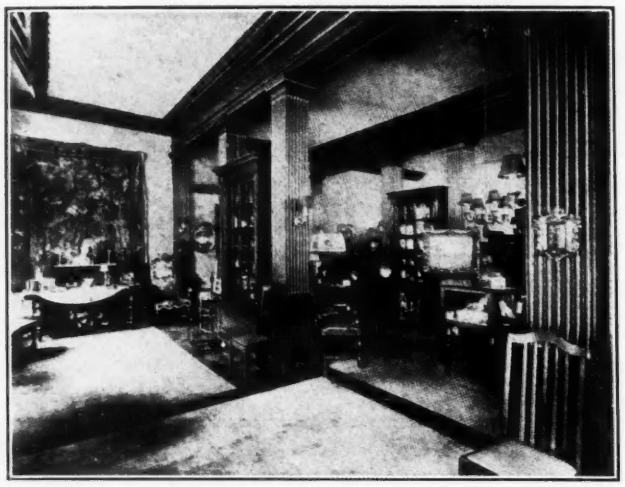


Manufacturers of

Architectural
Terra Cotta
Pressed Brick
Sewer Pipe
Chimney Pipe
Flue Lining
Fire Brick
Mantel Tile
Conduit Tile
Acid Wares

Factory: South San Francisco, San Mateo Co.
Yard: 18th and Division Sts., San Francisco

Main Office, 729 Mills Building
Telephone Douglas 3010
San Francisco, Cal.



UNANDER & JAKWAY

Successors to MOORE & COMPANY

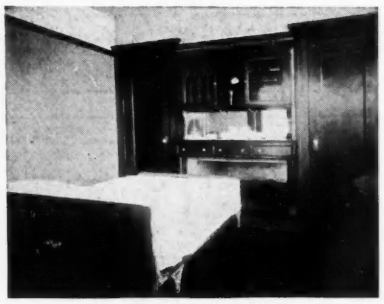
Alder at Eleventh Street

Interior Decorators and Dealers in Draperies, Wall Hangings, Upholstery Fabrics, Floor Coverings, Furniture, Sheffield Plate, Paintings, Prints, Antiques, Plastic Reproductions, China, Crystal.

Sole Agents for Rookwood, Teco, Ruskin and Royal Copenhagen Potteries

Decorative Treatments, Sketches and Estimates Submitted

CORRESPONDENCE SOLICITED



Ready for Use

The Correct Thing

For Hotels, Homes, Flats, Apartments

Economical
Healthful
Sanitary
and
Convenient

Holmes Disappearing Bed

Architects endorse and Specify it
Owners and Investors demand it

Holmes Disappearing Bed Company
Incorporated

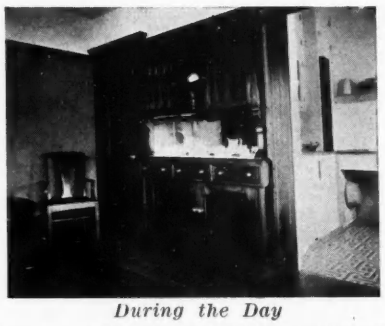
Maximum Revenue From Minimum Space

369-372 Arcade Annex, Seattle

225 South Wall St., Spokane

S. B. Cooke, 422-3-4 Failing Bldg., Portland

Room 210 Riggs - Selman Bldg., Vancouver, B. C.



During the Day

Ask Us Why

THE TUEC

Has Captured the Country

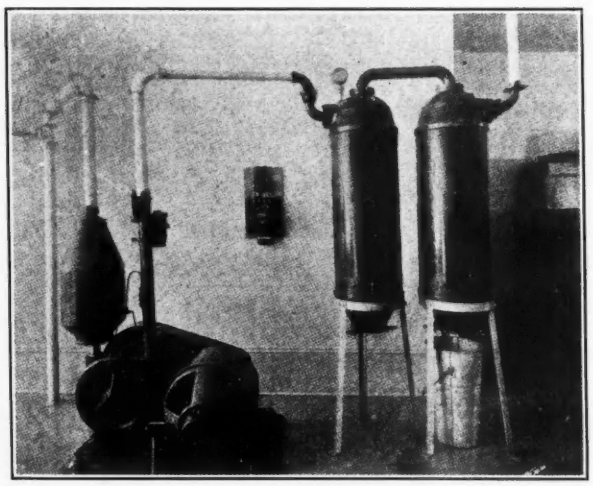
THERE ARE REASONS

Tuec Company of Oregon

408 Lumbermens Building **PORTLAND, OREGON**

Marshall 1916

Oregon Distributors for the United Electric Co. of Canton, Ohio.



Heavy Duty Rotary Type Plant

"RICHMOND"

Stands for efficiency in Vacuum Cleaning "STEAM ASPIRATOR" "ROTARY" and "PISTON" types—the only THREE successful machines that have stood the test of TIME.

Manufactured by the Richmond Radiator Co., New York and Chicago, in all sizes from the small residence plants to the largest system in the world—Sixty Sweeper Capacity.

CAMERON-SCHROTH CO.

SELLING AGENTS

JNO. H. NIEDERMARK — 603 Board of Trade — Portland, Ore.

GROVER McHUGH — 508 New York Block — Seattle, Wash.

224 So. Howard St. — Spokane, Wash.

The Pacific Coast Architect

VOLUME V — SAN FRANCISCO, CALIFORNIA, JULY, 1913 — NUMBER 4

COAST PUBLISHING COMPANY, Inc., Publishers

L. J. FLYNN, *President.* J. A. DRUMMOND, *Manager, Sec. and Treas.*

PUBLISHED ON THE TWENTIETH OF EACH MONTH AT
725 CHRONICLE BLDG., SAN FRANCISCO, CAL.

Subscription in the United States and possessions
$5.00 a Year. Foreign and Canadian $6.00 a Year
Single copies, each 50 cents

Application made for transfer of second class entry from Post Office at Portland, Oregon, to Post Office at San Francisco, California. C.D. No. 146758.

Changes in, or copy for new advertisements must reach the office of publication not later than the Twentieth of the month preceding issue.

The Editor will be pleased to consider contributions of interest to the readers of this publication. When payment for same is desired this fact should be stated. Self addressed envelopes must accompany all such contributions.
ADVERTISING RATES ON APPLICATION TEL. DOUGLAS 3424

Current Comment

When economy of space is required in a small house, the bathtub may be placed beneath the floor, covered by trap doors when not being in use.

✧ ✧ ✧

A mixture of dry Venetian red in gum arabic mucilage, to the consistency of putty, makes an admirable filler for fine cracks in mahogany.

✧ ✧ ✧

Wire mesh netting, such as is used in concrete reinforcement, is now being applied in concrete pavements and roadways as a binding medium.

✧ ✧ ✧

Steel needles are now used to perforate the surface of wood to be treated with creosote. They penetrate to the distance of an inch.

✧ ✧ ✧

Rolling doors of solid concrete, eight in number, are employed in the new station of the Boston Elevated Railway at the Harvard athletic field.

✧ ✧ ✧

City authorities at Glendale, Calif., have erected circular concrete guard walls around trees in the residential portion of the city to protect them from traffic and eliminate the necesssity of cutting them down.

✧ ✧ ✧

A house constructed most of steel, with concrete foundations and floor, has been designed for the tropics. The little wood used is chemically treated to resist insects. The framing of steel is filled in with mosquito netting, between perforated metal sheets to prevent bulging. It is an ideal mosquito and storm-proof dwelling.

A door hinge with wedge-like parts has been invented. As the door opens it is raised clear of the floor by ¼ of an inch, doing away with the necessity of thresholds.

✧ ✧ ✧

There is an odd piece of furniture in the office of a brick company at Long Beach, Calif. It is a center table made entirely of brick. Buff-colored glazed brick constitute the top, while the legs are of fire brick.

✧ ✧ ✧

The County Court at Lakeview, Oregon, has appropriated money for a concrete bandstand that will mark an advance in the architecture of such structures. It will be semi-octagonal in outline and an amphitheater in arrangement.

✧ ✧ ✧

W. D. Foss, of Centralia, Wash., has invented and patented a preparation for curing wood so that it will withstand the elements. Mr. Foss is president of the Centralia Wood Preserving Company, recently incorporated, which will manufacture the new compound.

✧ ✧ ✧

Vancouver, B. C., Architects Elect Their Officers

The following list of officers were elected at a special general meeting of the Vancouver Chapter of the B. C. Society of Architects held on May 22, under clause 5 of the chapter by-laws:

President, W. T. Whiteway; vice-president, J. L. Putnam; hon. secretary, W. T. S. Hoyt; hon. treasurer, W. M. Dodd; members of council: J. C. Day, F. G. Gardiner, E. Sonnichsen, C. J. Thompson, G. A. Birkenhead, G. A. Horel, R. J. MacDonald, Robert Lyon, J. G. Leibert and J. D. Beatson.

✧ ✧ ✧

Suggests More Publicity for Architects and Engineers

At one of the recent regular weekly luncheons of the Portland Technical Club, Marshall N. Dana, a local newspaper reporter, explained the manner in which news is gathered and handled in newspaper offices. Mr. Dana made the suggestion that architects and engineers ought to give more publicity to their professions. He believed that if proper explanations were given on public work, difficulties would be eliminated or at least minimized. He also thought that the technical men of the city should devote more attention to civic improvements of a local nature.

Tremendous Figures Show Progress

San Francisco's forward march continues steadily and unfalteringly.

Day by day, week by week, month by month a new chapter of progress is written in indelible records of stone and steel.

The city grows and expands in every direction. The hammer of the builder is everywhere, every day, beating chimes of prosperity. It is the heart of summer and there is no lessening in the activity of new construction.

June has gone, leaving in its trail a new record, a convincing, significant demonstration of what is being done—nearly two and a half million dollars worth of new building in its thirty days.

June's record brings the total value of building work done in the first six months of the year up to the tremendous total of $16,221,001. This is an increase over the first six months of 1912 of $2,038,580.

Such a remarkable record after ten years of building activity unequaled in the history of cities, ten years during which this city has seen the erection of $290,000,000 worth of new buildings, is the best possible proof of the stability of the city's prosperity.

The figures for June building, taken in conjunction with what has been done by San Francisco since the fire, become powerfully significant.

They show that the city has not run out of money or credit. With a loss the greatest in the history of the world, the city came back with rebuilding operations that have amounted to over $235,000,000 since April 18, 1906. For two years after the fire structures erected cost from 25 to 35 per cent more than the original contract price. Since then the work has cost from 10 to 15 per cent more than the contract price, which brings the estimated totals of rebuilding up to $290,000,000, or as much as it has cost the Federal Government to build the Panama Canal.

Nor has it apparently staggered the city for a moment. While the work of building the Panama Canal has been heralded from one end of the earth to the other as a world accomplishment, the citizens of San Francisco have individually and collectively achieved a like result without any particularly great strain.

Here are the figures for the months of June, as a fair basis of comparison the past ten years showing what has been expended both before and after the fire:

June, 1904	$1,516,533
June, 1905	2,376,928
June, 1906	687,391
June, 1907	3,937,598
June, 1908	3,475,506
June, 1909	1,398,446
June, 1910	1,458,464
June, 1911	2,625,740
June, 1912	2,058,224
June, 1913	2,494,673

Nor are the June figures the result of any fluke. The same results are obtained if a comparison is made of any of the months since the first of January. Taken by months the totals are as follows:

1913.	Contracts.
January	$2,678,990
February	2,559,364
March	3,571,045
April	2,710,520
May	2,206,409
June	2,494,673
Total	$16,221,001

This amount was also an increase of $3,497,890 over the building operations of the first half of the year 1911, when the figures were $12,723,111. If the present rate is kept up throughout the year as has been shown by the first six months, the cost of new structures will exceed those of 1912 by $7,000,000. And that this is very apt to happen is presaged by the fact that downtown structures that are now being planned total a sum over $5,000,000.

Trade Magazines and Their Subscribers

Subscribers to trade journals, many of them, do not realize how very welcome any comment they make is to the editors of the journals to which they subscribe. If they did, they perhaps would be willing to do more suggesting. There may be a few who are of the belief that it is not necessary, and that it should not be necessary, for them to do anything other than subscribe for the paper. This is a very mercenary viewpoint, but, withal, a very natural one. They think, most logically, that so long as there are editors on the job these editors should earn their own salary. But subscribers, in thinking this, fail to realize that the trade journal is different from the other papers which they are in the habit of receiving. They fail to realize, or perhaps they refuse to realize, that the trade paper is a part of their own business establishment and should receive a personal interest similar to that which they put into their own personal business transactions.

It must always be remembered that the value of the trade magazine lies in the observations it gives forth of the business with which it has to do, and that the broader the field from which these observations are drawn, the greater the value of the magazine to its subscribers. It is natural to suppose that incidents arise in the day-to-day running of a business that would be food for good stories, could a writer be on the job to take them in when they occur. These incidents, if they be in the nature of difficulties, and in the manner in which they are met by the subscriber, would be interesting reading, if not educative and suggestive as to the methods of solving business troubles. It is certain that, no matter what they might be about, they would be immensely relished by other brothers in the trade.

Assist, then, in making the trade paper an advertiser of the cures for your troubles. If you have not thought of a panacea applicable to your case, it is always possible to find an editor who has thought of one. Editors are self-appointed doctors of trades. Some are quacks; but there are a few who are really conscientious, and who appreciate the fact that they are not infallible. This kind of editor is always willing to receive criticisms and suggestions from anyone in the trade, and, in fact, is more than glad to have censure or praise from those who can read and appreciate, for better or worse, the matter appearing within the columns of his paper. Get busy, then, and help in making your trade journal a medium that will uplift and assist in the progression of the business that you are in. Remember that in helping the trade as a whole you help yourself. You can not go much faster than the people about you go. And remember this: The trade paper is the best instrument there is to get everybody started. It creates a oneness, a cohesiveness of those within the trade. But in making it a personification of you, your ambitions, your ideals, you must speak through its columns.—Cement World.

High Cost of Brick Houses

A writer in a publication devoted to the manufacture of clay products makes the claim that the high cost for constructing brick buildings is due mainly to the bricklayer. He states that brick, while comparing favorably as to cost of material laid down on the ground, with that of any other material, costs more in the building. In other words, it is not the material that makes brick houses cost more, but the labor that places this material in the building.

Further investigation showed these facts: That bricklayers receive $6 a day of eight hours, with a helper to each bricklayer who receives $4 a day, and with a limit of 1,000 brick per day's work.

"It is the bricklaying that is at the bottom of the entire problem," said one dealer when approached to offer some solution. "The manufacturer has minimized the cost of making his product by the installation of modern methods and machinery, but has overlooked the fellow that puts his product into the walls.

"There is a scarcity of bricklayers now, but if we could turn them out like trade schools turn out printers, carpenters and others, there would be a different story. Look at the electricians! Why, a few years ago it was almost impossible to get a competent electrician at a reasonable price. Today, however, it is different. They are still getting good wages, but they are doing more work and better work."

It was suggested that the union bricklayer argued he was not getting more than a living wage today.

"Let him have his $6 a day," replied the manufacturer. "I don't begrudge him his wages. What I do kick about is the output. He limits himself to 1,000 bricks a day, and yet it is a poor bricklayer who can not put 3,000 brick in a wall every day in the week. That makes quite a difference, doesn't it, when you begin to figure construction cost? Take, for instance, common brick here in Chicago. You can get them laid down on the job for $6 per 1,000. Yet you've got to pay $10 to have them laid in the wall—or $4 per 1,000 more than they cost to manufacture.

"What we want is to have the restrictions taken off the amount of labor a man can do in a day. If he can lay 2,000 brick or more, let him do it. Then, too, there is the question of helper. By the rules of the union every bricklayer must have a hod carrier, who must be paid $4 a day, yet where there are a dozen bricklayers on the job one or two would be sufficient.

"As it is today, with ten men on the job, the hod carriers are so numerous they get in each other's way, and there is so little for them to do they have a hard time to find an excuse to keep moving."

Our friend struck a keynote when he said the solution was in the trade school that "could turn out bricklayers like the printing schools and other trade schools do."

Investigation, however, shows that there are few trade schools in the country offering a special course to the bricklayer. If every brick manufacturer in the country could be enthused to the pitch of doing a little local missionary work by encouraging young men of their community to get in touch with schools of like nature, it wouldn't be long before the bricklayers' union would be forced to change some of its restrictions. The law of supply and demand applies to trade and labor just as it does to industries and capital. Scarcity of labor makes labor arrogant and tends to create a monopoly in an industry. With the bricklayers' monopoly broken and the doors open to young men who want to learn a profitable trade, amicable relations will be possible between the employer and the employe, the brickmaker must continue to carry the burden he has today.

✧ ✧ ✧

The new Chamber of Commerce Building at Cincinnati is the highest inland structure in the United States. From sub-basement to the top of the tower the height is five hundred thirty-five feet, or four hundred ninety-five feet above street level. The tower portion of the building is thirty-four stories above and four stories below street level. The structure contains 5,175,000 cubic feet of space, and cost $2,500,000.

✧ ✧ ✧

Architectural Jury Selects Best Schools in California for Publication

The jury of prominent architects appointed by the Honorable Edw. Hyatt, State Superintendent of Schools, to advise him in the selection of the best schools of the State, for publication in a new booklet to be sent out to all school trustees and architects, met June 19 at the San Francisco Architectural Club, and were very enthusiastic over the four hundred or more buildings submitted.

From the photographs and drawings exhibited the following schools were declared by the jury to be the best and will be published by the State:

One Room School Buildings—Visalia, plan by N. Y. Davis; Mill Creek, Mendocino County District School, remodeled; outdoor class room, Pasadena, plan and two photographs by Myron Hunt; two room County School, plans by C. L. Stiles; four room School, plans and two photographs by Theo. C. Kistner; eight room Grammar School, Santa Paula, plan and two elevations; Grammar Schools, Madera, plan and three elevations by Ben McDougall; Artesia, plan and elevations by Withey & Davis; High School, Monrovia, plans and elevation showing out of door auditorium by Allison & Allison, Nordhoff, photographs, Princeton, elevation by Parker & Kenyon; Normal Schools, Los Angeles, plans and perspectives by Allison and Allison, San Jose, plans and two photographs by the State Architect; Santa Barbara, plan by State Architect.

The jury of architects was composed of the following members: Lewis P. Hobart, chairman; Chas. S. Kaiser, J. W. Wollett, J. J. Donovan, C. H. Cheney and Robert Farquhar (absent). The judgment was held in concurrence with the Hon. Edw. Hyatt, who was present.

The school buildings shown are of an extremely high order, particularly the larger schools.

In speaking of recent developments in school building in California, Superintendent Hyatt called attention to the fact that this state has taken very rapid strides in the past five years and that now structures built prior to that time are practically out of date as to convenience and planning.

The purpose of this investigation is to put before the public the best examples erected in the last few years, and to this end a jury of architects of high standing was appointed to pick out such buildings as were architecturally good, that they might be held up to the community as an example for future work. Mr. Hyatt feels that much good will come of this investigation, both in educating the public and in raising the standard of school building of this state and of the country at large.

Fireproofing Construction

NATHANIEL ELLERY, C. E.

THIS subject has perhaps been flaunted to the public gaze under false interpretation, and more misunderstood, than any other phase of construction. Strangely, so much has been written and said of it, and yet so few have a clear conception of this most vital and important question in all building work. The annual fire losses in America are so tremendous and appalling that it staggers one to give proper comprehension of why we continue yearly to feed the flames, to the positive economic loss to the country. Municipalities continue to expend vast sums in fire departments and great water systems, solely to meet the fire demands, and at the same time remain unduly lax in their demand of construction of a quality to be a fire preventive. We can not truthfully say our buildings of today are anywhere near a reasonable fireproof standard. Taken as a whole, we are using construction in our fire limits that is nothing better than a good fire breeder, and yet the notion prevails that so long as some materials used in buildings are incombustible, they make them fit as a fire resistant. It is my desire to carefully take up the various matters that enter this line of work, and without technical display, give facts and reasons for the guidance of the builder that many of the minor and sometimes unthought of problems of fireproofing may be squarely met and properly treated.

In the history of building development, humans began to crudely shape original structures of poles, then laminated stone and sun-dried bricks, and then fire-burned bricks. Go back to the ancient ruins and see those materials best preserved, and you find them of burnt clay. And through the ages and today, we find the same burnt clay a material of superiority as a fire retardent and a fire resistant. It has gone through fire in its manufacture and is incapable of again assuming the heat it was once subjected to. Ordinarily we divide the materials of construction into combustible and incombustible classes, and the latter class in turn is divided into damageable and non-damageable in the heats produced by the ordinary fire. With these divisions there is yet a matter so vital to the owner that it must be given a proper consideration, otherwise our stipulation would be totally inadequate to meet a fair presentation of the subject. Reference is made to those materials used which are damaged by ordinary fire and can or can not be replaced at the damaged part or section only. For instance, should you have a building partially destroyed by fire and you desired an adjustment of the insurance, you would require the replacement of the damaged parts equally as good as the original, or as nearly so as practicable. Here, then, if you had walls constructed on the unit basis, that is, materials constituting the walls were of brick or blocks, you may replace the damaged units, while if you had a material as concrete constituting those walls, then to make the job good it would be necessary to tear out the wall to a division line in the work. Later in this article I shall go more deeply into this comparison, that no misunderstanding may result.

Too little attention and study has been given our fire limits, and the certain change at some future date, extending these limits and thus including a vast area of wooden construction, ultimately means expensive fireproofing in this area. Occasionally we note a building here or there erected outside these limits which complies with the laws for building in the restricted district. It shows a highly commendable spirit in the owner, but does he or she realize the positive necessity for an extremely high-class fireproof structure in this instance. The position of the building and its surroundings mark the first step in fireproofing the structure. If we may build in a lot or block, and isolate the structure from other buildings, then may we release our attention to strictly fireproof exterior finish and allow of some latitude in damageable materials, as stone and metal. In a nest of wooden buildings, no chance should be taken, and the best materials and design should enter the work if you hope to be secure against fire. Go into the fire limits of our cities, and where the buildings are closely located, view the lack of fireproofing, and again note the necessity of construction to resist the ravages of conflagration. It is apparent to the casual observer and calls forth criticism of those who study this problem with a view to betterment of conditions. Vast quantities of wood enter the construction of the major portion of the interior of most of our buildings, and for this reason the location of the structures has an intimate bearing on the relative fire resisting qualities. Erect a building in the fire limits closely surrounded with structures whose interior is wood, and you must provide extra good materials to meet the contingency of conflagration. Build on the edge of the fire limits, and again your risk is immeasurably enhanced. So with supposed fireproof construction without those limits. Unquestionably, the class and kind of building must be improved in the above positions if we hope to resist the destruction attending a moderate conflagration. In general, we are not measuring up to a standard good business demands in this matter. From the location, we may pass to the use of the building and its arrangements. These points are supremely vital and lead the way to the use of proper fire-resisting materials, to be incorporated in building work. Regard, for instance, some buildings that come to your attention, and note if the following conditions are fulfilled:

Plan the office structure along the lines of best practice and make the space into units, so that fire from the inside may only damage materials in that unit, and can not spread. Allow no great chimneys or elevator shafts, stairways, ventilators or pipe vents. Control all openings into courts or light wells, so fire can not get in these flues and make a furnace of the building. All elevator shafts should be closed, stairways at the ground floor should lead directly to the exit of the building, and at each floor line fire doors should be established. The use of wood in the interior finish should be minimized and the windows should be of high grade wire glass. Other buildings should receive special treatment as to arrangements. Warehouses of more than one story should have drains or scuppers, that water may be readily drained from any floor without damage to the other floors. Stores should be arranged to preclude interior fire from reaching other stories through rotunda openings or other escape vents leading between floors. In fact, each structure should receive attention in all details as to arrangement to minimize loss by fire, as sometimes the smallest of these may entail heavy loss. Much money may be spent in furnishing supposedly fireproof construction, and a minor item of precaution disregarded, thus risking the expensive work unduly.

We now come to the important item—materials that enter the building work. The frame or structural part constituting the strength of the building must be of fire-resisting quality, or else the value of the whole construction is subjected to failure by fire. Steel, the highest

grade of framing material, has but little resistance to heat and must be protected in order to meet its best service. Encase the steel in a good fireproof material and the acme of structural work is reached. Leave it to the ravages of heat and it fails utterly.

Many reinforced concrete frames are now being used and they are termed fireproof. Let us here diagnose this practically new chemical material and ascertain its fire-resistant value. Go to a reinforced concrete building while the forms are being stripped, and see the inequality of the deposited material—solid concrete rich in cement, weak concrete, lean of cement, and then rock pockets of little strength value. Is this fire-resisting? Yes, but in the order of the content of cement. The rock pocket is valueless, the lean material has some ability to resist heat, and the good material resists from 500 to 1000 degrees of heat Fahrenheit. To be sure, the depth of affection of the good concrete is limited to a depth of about one inch in the ordinary fire, while the smeared-over rock pocket of concrete is worthless. It is now regarded in good practice that the material outside of a column or beam is simply fireproofing, and is not calculated to take any part of the stress of the member. Again, all corners should be rounded, as fire spalls the sharp angles and will expose the metal of reinforcement to destruction by heat. It is remarkable how rapidly and easily we assign merit to a material without full demonstration of such. Let us take a fire of 1500 degrees Fahrenheit heat, and subject a concrete structure to it, and as the material dehydrates, or the water of crystalization is forced out, we apply the stream from a hose, the pressure of which immediately casts off the inert material, so that if the concrete surface is again exposed to heat, the same action goes on, destroying the material to an irreparable point. This is a most likely situation and may occur at any fire in a concrete building. Did you ever stop to think that the heavy structural timbers in a mill, or slow burning mill constructed building after fire chars the outside, burn but slowly, and if you remove the char the burning is augmented? Here is a point in common, that concrete is incombustible and wood is combustible; but the materials are destroyed by the same agent. The old-time brick walls used structurally have the highest fire resistance of any of our commercial building materials, and rightfully, for they are made by subjection to a heat of from 2000 to 2800 degrees Fahrenheit. Bricks are made, not destroyed, by heat. How then, as a fire resistant, can we class it with those materials destroyed by ordinary fire heat? You may as well compare the factor of safety of a steel frame to that of reinforced concrete. One technical writer has recently stated that if we applied the same relative factor of safety to reinforced concrete construction as now used in the field, we do to steel construction, the use of concrete would be abolished.

The outer walls of buildings subject to conflagration or external heat should be made of brick, not concrete. Well burned bricks with good mortar withstand the flame. The mortar may give way ¾ of an inch from the surface, but this can be raked out and the joint repointed. A concrete outer wall subjected to the same heat will dehydrate, or break down in its structure, about one inch, which material can never be replaced satisfactorily, as a junction of new and old concrete is always a weakness in building work. If that concrete wall had been plastered, then this outer material would have spalled and popped off. Again we may recite the experience in San Francisco of the water-proofing on the side of a concrete building that recently caught fire and made a splendid blaze on the side of the wall and destroyed a material used to protect from storm, not fire. To be sure, one may say the same material used on a brick wall would act similarly; yes, but the wall of brick is not so porous as the concrete, and therefore needs not the heavy water-proofing used to protect this concrete wall. The relative porosity is not readily determinable, but do you find the rock pockets, cracks of shrinkage and joint cracks of the concrete, all of which are points of leak in the wall of brick? While on the subject of outer walls I can not refrain from calling attention to the superiority of brick and terra cotta for front walls, instead of reinforced concrete or stone, from a purely fire damage point of view. In the great fire of San Francisco, terra cotta and brick front walls stood the test wonderfully well, while stone spalled and chipped until it was entirely unserviceable. To properly decorate the front of a concrete building, it usually requires cement plaster and much cast concrete work. In a fire, can you not see all this finish work destroyed by a heat that would not even mar brick or terra cotta? Let us now regard the interior of the buildings.

The partition walls, fireproofing around columns and beams, the inside trim and other items used interiorly. For steel structural members we should by all means fireproof with the best resistant materials. Plaster on metal lath, hollow tile and concrete on mesh are used. As we all know, lime in plaster fails in just ordinary heat, so that this is simply a retardent. Hollow tile laid up in good mortar and given space to expand makes excellent fireproofing, while concrete, on account of its inequality of density, is very uncertain in its fire protection. Hollow tile may cast off its facing, but being in units is easily repaired. It should, however, be tied to the column or beam so that it will not be stripped from the structural member. Concrete, on the other hand, will certainly dehydrate, and its proper repair means a complete new encasing of the member. It is difficult to clearly ascertain on the work the line of demarcation of the damaged and undamaged concrete, and therefore another uncertainty arises.

For interior partitions we are well acquainted with the old solid brick wall, which was surely substantial and fireproof, but its weight has now precluded its use in this position. In its stead we employ the solid plaster partition, metal lath and plaster, hollow tile, and reinforced concrete. However, the latter is usually too heavy for modern designing. Thus the hollow tile partition with inserted wire mesh between horizontal layers gives rigidity and best stands the heat. Plaster in its various forms is certainly a retardent, but it is not very effective, and especially against a moderate fire.

In the better class of buildings now being erected wood is practically relegated to the past. Metal trim, finish and furniture have now become a part of the modern fireproofing scheme. Wood, if used at all, should be placed with caution. View some of our class "C" buildings and note the mass of wood for construction included within the outer walls. In these a good hot fire will undoubtedly destroy all materials except those of the highest resistance, as brick. Again, we see warehouses and stores to house much combustible material built of reinforced concrete, with the certain knowledge that vast destruction will occur should an internal fire get well under way. Many fire fighting devices have been erected to minimize the chances to which our structures are subject, but these at times fail to work at the opportune time. For instance, a sprinkler system tank resting on a concrete sub-structure was so damaged by an earthquake about two years ago as to make it unfit

for use until a whole new structure of steel had supplanted the shattered concrete. Had a fire occurred during this period of change for about two months, it would have been unhampered by any sprinkler system. Luckily, this tank was not precipitated through the roof and floors of the building it served. Many advocates of various materials for the different parts of a structure have given profound thought to their proper use, and again, much commercialism is involved in forcing a material into a use it is not fitted for. I can not resist to quote from one of the recent books on reinforced concrete and note a leading discrepancy. "As concrete in its manufacture has passed through a period of intense heat, it suffers but little from the further application of high temperatures." No one ever heard of concrete passing through great heat in its manufacture. Cement did, but when put with water it undergoes a chemical change to make the sand and rock ingredients of the concrete stick together, and when we have the artificial stone-concrete it is made by adding water, not fire.

The old reliable brick wall for fire resistance can not be beaten. The great designers and constructors know its value and use it in modern construction in places where best adapted. We have all heard of the great Woolworth building in New York City. In its walls 17,000,000 bricks were used and nearly 60,000 tons of terra cotta and hollow tile. This building is termed absolutely fireproof and is the acme of such construction to date. The subject presented is so vast in scope one can not treat it fully in so short a space, but to give the general characteristics and some guiding details. It is well, however, to keep the matter before the builders and owner's vision, that he may profit by the application of sound fireproofing for construction.

✧ ✧ ✧

Care of Oak Floors

If one only knows how, nothing is easier than the care of a well-finished oak floor. Water should never be used on a waxed or varnished floor. The surface may safely be wiped with a cloth dampened in tepid water to remove dirt and dust, but the dampness should be immediately taken up with a dry cloth.

One of the best mixtures for keeping a floor in good condition is the use of equal parts of sweet oil, turpentine and vinegar, well mixed and rubbed on the floor with waste or cotton or woolen or rags. The vinegar will cut the dirt or grime worked into the finish from shoes; the sweet oil produces a luster, and the turpentine promptly dries the moisture.

The above mixture need not be applied oftener than once a month to insure a floor finish that will resemble the sheen of a piano.

Should wax finish become worn in spots from hard usage, a little of this mixture, thoroughly rubbed, will renew the finish quickly.

The occasional use of a weighted floor brush alone or with a piece of Brussels carpet placed beneath it, will assist in keeping the finish of an oak floor in good condition.

Once a year it is well to use a good floor wax and rub into the floor with the aid of a brush, with or without a piece of carpet attached. Before the finish is worn down to the wood, an additional coat of wax should be applied and thoroughly rubbed.

For School House Construction

The Bureau of Education, Washington, D. C., is sending requests to prominent architects throughout the country for data to be used in a bulletin on school house construction.

The information desired consists of the following:

1. Photographs: (a) exterior; (b) special features of interior construction and arrangement; (c) special rooms as assembly room, gymnasium, manual training, domestic science, laboratories, toilets, baths, etc. 2. Drawings in black and white of floor plans. 3. Descriptions of special features. 4. Statement of actual cost per cubic feet.

These bulletins will be distributed to school men and school architects all over the United States.

✧ ✧ ✧

San Francisco Architectural Club, 126 Post Street

To the Officers and Members of the Architectural Clubs of America:

Gentlemen: At the last regular meeting of our Club, a committee was appointed to investigate the feasibility of instituting a system of membership transfers between the various Architectural Clubs of America. And it is with this view that we propose the following:

At the present time the Clubs of the Pacific Coast transfer members in good standing. Any member going from one city which has an Architectural Club, to another, may become a member of the Club in the latter city without the payment of an initiation fee, upon presentation of a clearance card from the Secretary of his former Club.

At this time draughtsmen are continually leaving one Club to study at the great universities and to work in the various offices throughout the country. And there are a great many draughtsmen now in cities on the Pacific Coast who, if given a chance to transfer, would in all probability take up their memberships in Clubs of these cities.

The benefits to be derived from such a system of membership transfers would be:

(1) A decrease in the resignations of members who are traveling.

(2) An incentive for members on leave of absence from their own Clubs to join the Club in whatever city they may be working.

(3) Assistance to draftsmen in securing employment in a strange city.

(4) Membership in Architectural Clubs would become more valuable by reason of this system.

(5) The various Architectural Clubs would be brought into closer relationship and this might eventually result in permanent organization of Architectural Clubs.

We would ask that you give this important matter your consideration at the earliest possible moment. Upon your approval of same we will submit our plan for your criticism. Any suggestions you might offer would be greatly appreciated by,

Yours very truly,

S. F. ARCHITECTURAL CLUB,

Address: W. T. GARREN, Transfer Committee.
Transfer Committee

We will be pleased to hear from any club which has not received this letter by reason of our not knowing their address.

Fees of the Architect

In view of the many published statements about the large fee to be received by Guy Lowell, the architect of the new court house for New York, it is interesting to observe the element of uncertainty which attaches to the profit to be derived from an undertaking of this magnitude, says the Philadelphia "Public Ledger."

The cost to an architect of preparing his drawings and specifications and seeing that they are properly carried out, in offices run on the best business basis, is at least one-half of his commission. This, however, applies only to the general class of buildings and not to residential or public and monumental work. The cost is then as high as seventy-five per cent of the architect's commission.

The United States Government prepared a statement which was submitted to Congress (Senate Document No. 916, 62d Congress, second session) which gave the average cost of preparing drawings and specifications alone, exclusive of superintendence or any other field expenses, for the years 1905 to 1911, inclusive, to be 6.2 per cent. This was for preparing the drawings for the buildings erected by the United States Government and done by the supervising architect of the Treasury, a man known for his great executive ability, and, therefore, done with the greatest economy possible.

Reports have been submitted by the State Architect of New York showing that the cost to the Sate for preparing the plans and specifications made in the State Architect's office exceeds 6 per cent. The cost to the New York Central Railroad for preparing the plans for their new station has exceeded 6 per cent. Therefore, an architect who is able to prepare the plans for a $10,000,000 building at a cost to him of less than 6 per cent of the total cost of the building, must run his office in the most economic manner possible and take his chance that the work may cost him more than his entire fee.

It seems to be the general impression in many uninformed places that an architect makes a few sketches taking a few days of his time and for this work receives an enormous fee. The fact of the matter is that to prepare the plans and carry out the work of a $10,000,000 court house, will require the services of from twenty to thirty high-priced draughtsmen, as well as a number of engineers and specialists on structural work, heating and ventilation, sanitation, mechanical equipment, etc., working for a period of at least five years; will require a large office at a high rental, and with the most economic administration, his work will cost about $450,000. This will leave him about $150,000 profit, or about $30,000 a year.

What business man is there who is willing to head a $10,000,000 corporation with a salary of $30,000 a year? What corporation is there of this size that pays its counsel less than this amount? Such men, however, receive these salaries without investing any of their own money to obtain it. The architect must invest about $450,000 in actual cash paid out to receive his profit of $150,000.

All of the above has nothing to do with the professional training and skill of the architect and for which he receives his compensation. He must, therefore, not only invest his own money and run a large business office with a chance of running it at a loss, but he must give his skill in designing, his knowledge of engineering and construction, and his training in sculpture and mural decoration in order that he may obtain his fee.

Of course, it would be possible for an architect to have his work cost him less than one-half of his commission, and the result would be poorly prepared plans and specifications and inadequate superintendence of the erection of the building, which would result in a greater cost of the building, a far greater cost than any saving in the commission paid to the architect. In carrying out the work of the new court house, the architect will have to give almost his entire time and attention to this one piece of work and in comparison to the fees or salaries paid to the best men in other professions, his compensation will be very small.

Architect Hogue on Terra Cotta

Architect C. J. Hogue, of Portland, who is associated with E. T. Foulkes, strongly favors terra cotta in building construction. In a recent interview Mr. Hogue said:

"In going about Portland since my return I have been surprised at the large number of wood-framed residences with exterior finish of cement mortar on wood or metal lath, and have wondered why terra cotta blocks have not come into more general use for wall construction here as they have in the East.

"It seems to me that in America we have tried to adopt various methods of building from Europe without going far enough into the reasons for them, and that one of these is cement finished exteriors. In England and on the Continent a great many, probably the majority of buildings are finished in cement, and whitened, but the reason is that the bricks are soft in quality and not pleasing in color and they are covered to protect them from the weather and to obtain clean and attractive exteriors. We liked the result and adopted the material and applied it to our wood-framed house without much thought of the future. An inelastic material like cement, concrete, brick or stone is bound to shrink, expand and contract with changes of temperature. In large masses of stone or brick the unit of construction is so small that the cracks are distributed so that they are not noticeable, while in concrete construction large cracks will occur in a few places, unless the concrete is so reinforced as to distribute the cracks fairly uniformly over the mass. Cement mortar on wood framing is not sufficiently reinforced to withstand the expansion and contraction, warping and twisting of the frame in the wide range of temperature and alternate wetting and drying in our northern states.

"Terra cotta lumber as now used for walls, however, offers a material strong enough to carry the floor construction whether of wood or concrete, one which gives a good clinch for the exterior mortar and the interior plaster and which has contraction joints at sufficiently close intervals to localize shrinkage cracks. Lintels over windows and piers under concentrated loads can be reinforced with steel and grouted with cement mortar or concrete to give almost any necessary strength. Houses so constructed are not much more expensive than if framed of wood, cheaper than if built of brick, warm in winter and cool in summer on account of the insulation of the air cells in the blocks, and, especially if the roofs are covered with slate or tile, are practically fireproof against exterior exposure.

"It seems to me to be a material well adapted to our climatic conditions where a cement finished exterior is desired."

Dropping Concrete One Thousand Feet

In providing a concrete lining for the double shaft of the Kingdom mine at Globe, Arizona, concrete was successfully dropped into forms one thousand feet below the mixer, reports Popular Mechanics. The lining was applied in successive rings of from 150 to 220 feet in height, beginning at the top. The forms, in 12-inch sections, were placed along the sides, ends, and across the center of the shaft. The concrete was chuted through a four-inch pipe discharging into an ordinary steel bucket suspended from the finished portion of the lining above. A short steel chute, extending from the side of the bucket, delivered the concrete directly into the forms.

✧ ✧ ✧

Inspection of Old Buildings

The Los Angeles Board of Public Works has endorsed the project of Chief Inspector of Buildings J. J. Backus, providing for the inspection of buildings which have been long in use and have not kept pace with the existing building ordinance as regards proper equipment and safety precaution. The report of Inspector Backus has been referred to the city council with the recommendation that positions of inspector be created for this purpose. Many old-time structures which have become dangerous through lack of repair must be remodeled to conform to the present building law, and others which are beyond repair will be condemned. An amendment is also proposed to the building ordinance making it unlawful to overload floors, with special reference to buildings used for public or semi-public purposes. Three inspectors are to be added to the building department to look after the proposed work.

✧ ✧ ✧

Individual Service

A leading Chicago architect some time ago suggested to the members of the profession that they should be so well acquainted with the work of especially skilled workmen on buildings, such as stone cutters, wood finishers and bricklayers, that they could suggest or insist a particular piece of work be carried out by a certain man or these particular men because the architect was familiar with the man and his work and he knew just what the work would be when it was finished. This is a good idea. It is an old idea grown into disuse in the rush of the past few years, but it seems that the men who are most successful are coming back to it. There is nothing like individual service. A Brooklyn architect also makes a good suggestion which, if followed out, will pay many times over the watchfulness it may require at first upon the part of men who have grown away from the good manners of youth. In an address just given by Dudley McGrath, a well-known architect of Brooklyn, before the Architectural Department of Pratt Institute, being one of a series of lectures arranged by the Brooklyn Chapter, A. I. A., on subjects pertinent to architecture and buildings, he added this to his practical remarks concerning superintendence: "In performing your work, whenever it is possible to do so, compliment the workman or contractor upon the work being done. We all like to hear nice things said about ourselves and one who only finds fault and never anything to commend is much disliked. You will find that by kind words, when it is possible to give them, you will, in the long run, obtain much the better results."

Local Stone for Postoffice Building

Through the efforts of Congressman A. W. Lafferty, Northwestern quarrymen and stone men have an opportunity afforded them of supplying stone for Portland's new postoffice building. The Portland Chamber of Commerce has been notified by the Secretary of the Treasury that this is the case. Those interested are securing data from the Secretary of the Treasury and the Supervising Architect in the matter. Inasmuch as $1,000,000 is to be expended on the structure and it is to be a public building, the stone interests of the Northwest, and of Oregon in particular, are interested that local stone should be used, if possible. This will be a crucial test of the qualities of local stone, and may have a great effect on the development of the industry. The Chamber of Commerce, Manufacturers' Association and Stonecutters' Union, represented by L. J. Birion, are co-operating in the movement. A survey of the Northwestern stone industry is in progress, which will result in a report as to possible output and other data. Samples of the various quarry products are to be forwarded to the Assistant Secretary of the Treasury Allen, through Congressman Lafferty, as well as names of quarry owners.

Local architects incline to the belief that a local stone entirely satisfactory can be found. Price and quality are two important considerations.

✧ ✧ ✧

Architects Aid for Rose Festival

At a recent meeting of the interests active in the reorganization and perpetuation of Portland's Annual Rose Festival upon broader lines and wider scope, an unusual feature was presented. President Edgar M. Lazarus, of the Oregon Chapter of the American Institute of Architects, proffered the advisory services, free, of a commission of five architects in the architectural and artistic features of the festival. A local newspaper opines that this "was indicative of the new policy of the professions in Portland to be definitely helpful in public matters."

✧ ✧ ✧

Evolving a New School of Architecture

The "Pacific Coast Architect" is in receipt of the Catalogue of the Fifth Exhibition of the Portland Architectural Club, held in this city, last month. The catalogue, like the event it represents, is especially artistic. It will ever serve as a perpetual reminder of that splendid exhibition. The world in general and the Pacific Coast in particular, should welcome, sustain and encourage these annual events. They make for the uplift of humanity and furnish high ideals in art and esthetics. It may not be too broad a prediction to make that the various architectural clubs of American coast and British Columbian cities, through these exhibits, at regular intervals, will gradually develop a school of architecture peculiar to the Great West itself. There are conditions and environments in the West distinct from those in the East, and it is probable that their influence will, by degrees, leave their indelible impression. The evolution of a distinctive school—one sui generis—is but a logical conclusion.

Too much praise can not be given the officers, members and exhibitors at the recent exhibition, for they have labored in a good cause, and the excellent fruit of their endeavors is in evidence.

Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

Photo by Gabriel Moulin

Living Room Ingle, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

Living Room, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

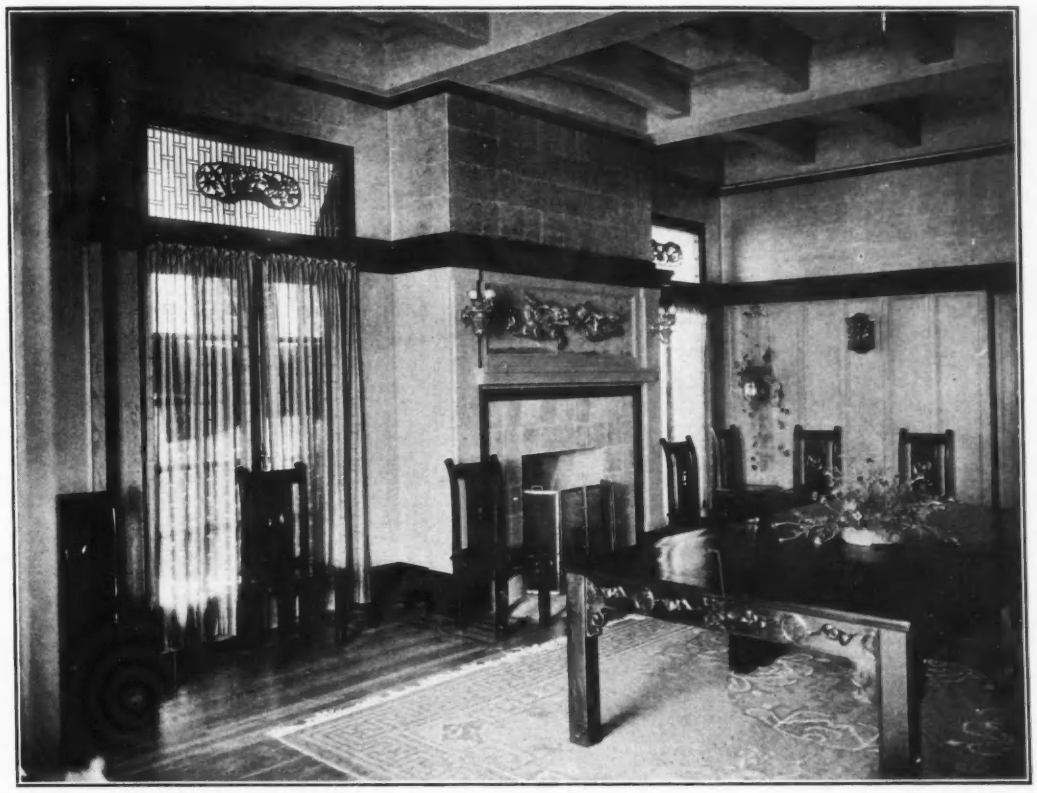


Photo by Gabriel Moulin

Dining Room, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

The Hall, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

Front Entrance (North), Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

Entrance Porch, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

Lanaii, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

West Porch, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

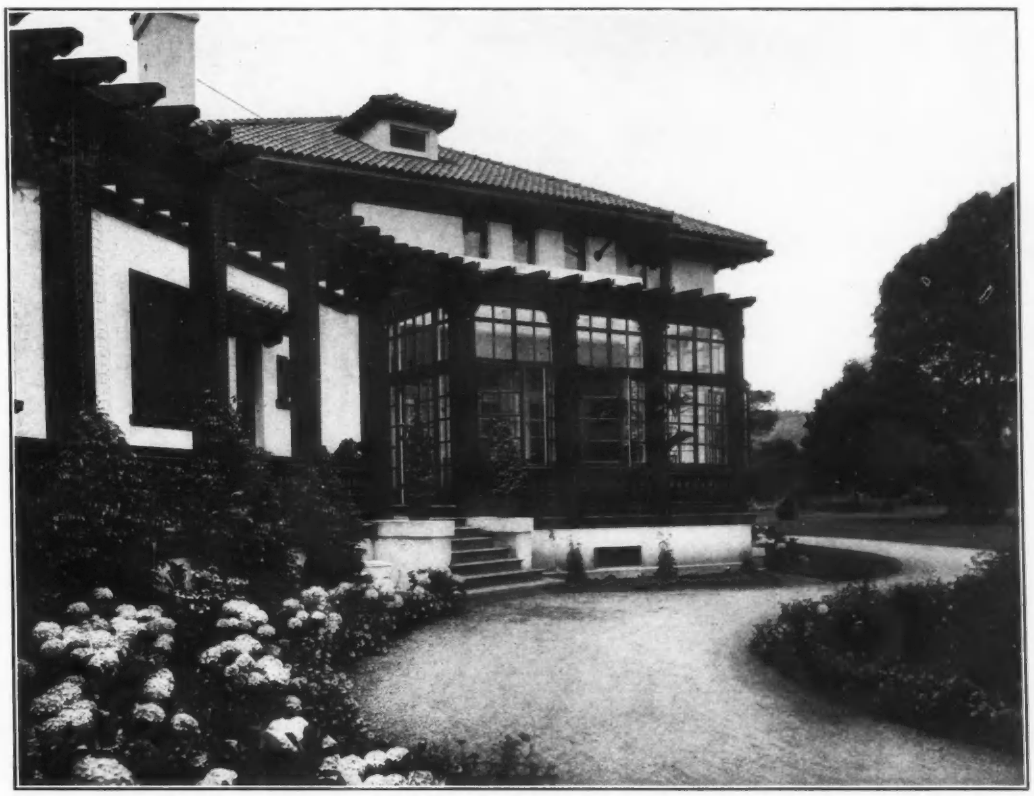


Photo by Gabriel Moulin

Conservatory and Breakfast Room, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

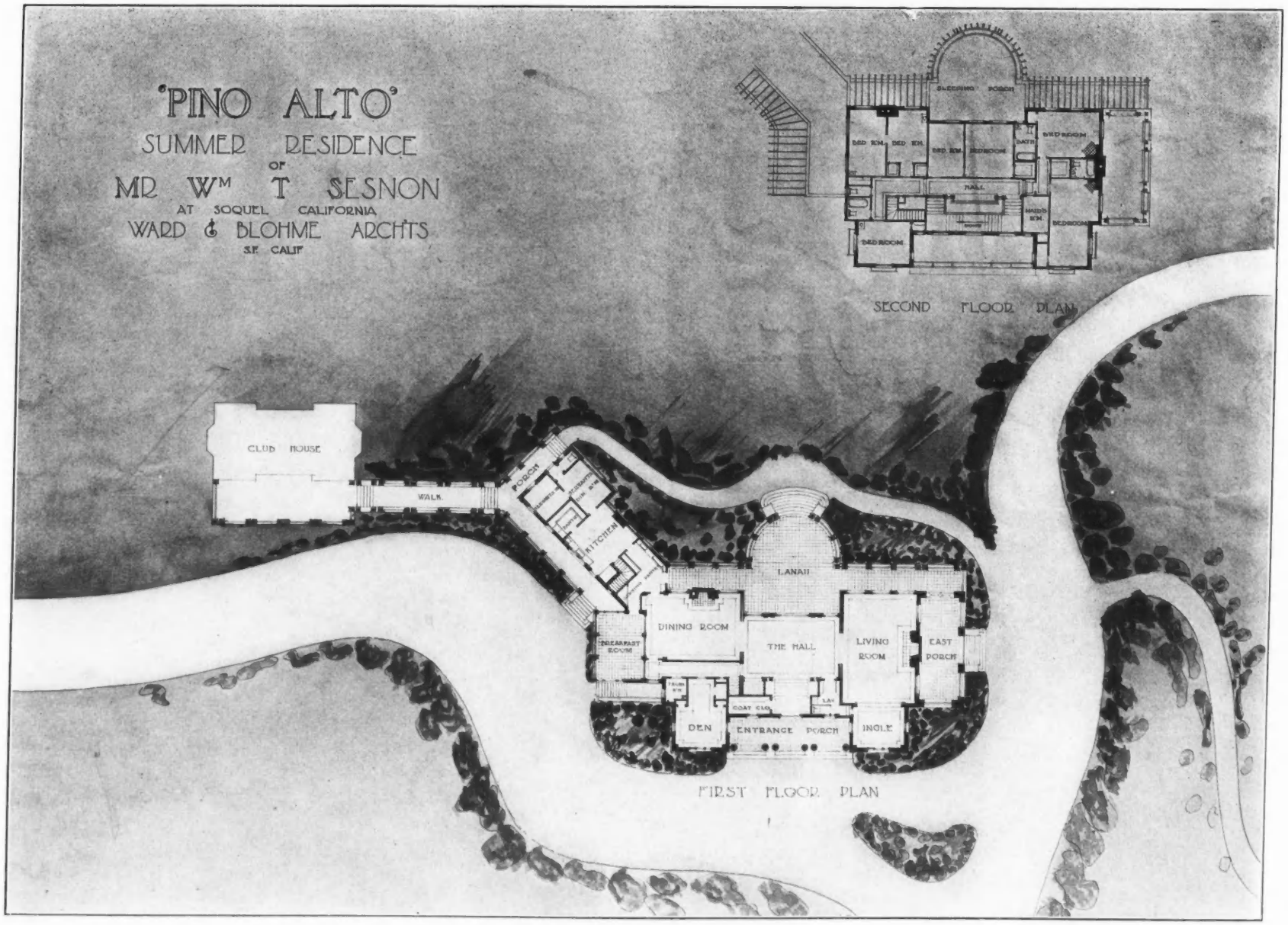
Entrance Gate, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

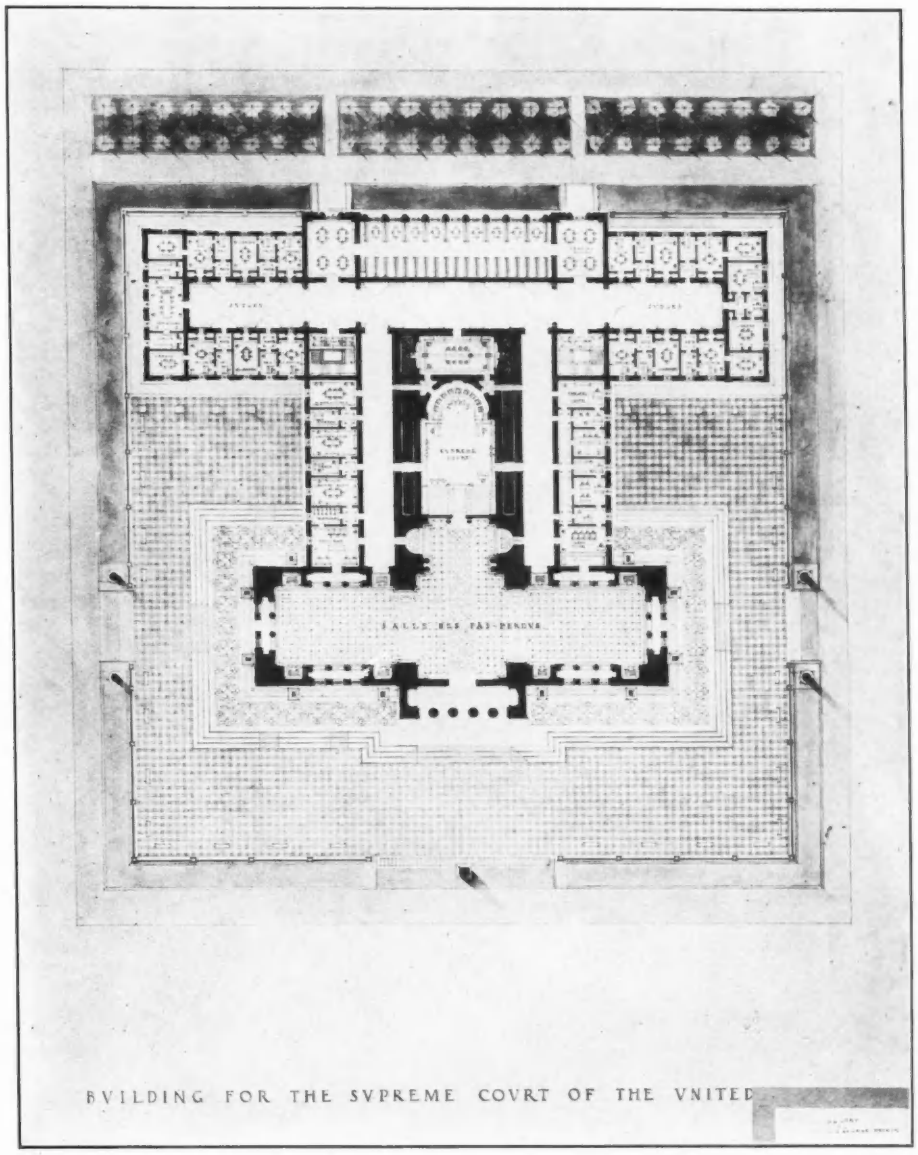
Photo by Gabriel Moulin

Garage and Stables, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.

Photo by Gabriel Moulin

The Lily Ponds, Residence W. T. Sesnon,
Soquel, Cal.
Ward & Blohme, Architects,
San Francisco, Calif.


"PINO ALTO"
SUMMER RESIDENCE
OF
MR WM T SESNON
AT SOQUEL CALIFORNIA
WARD & BLOHME ARCHTS
S.F. CALIF
SECOND FLOOR PLAN
CLUB HOUSE
WALK
PORCH
KITCHEN
LANAI
DINING ROOM
BREAKFAST ROOM
THE HALL
LIVING ROOM
EAST PORCH
DEN
ENTRANCE PORCH
INGLE
FIRST FLOOR PLAN



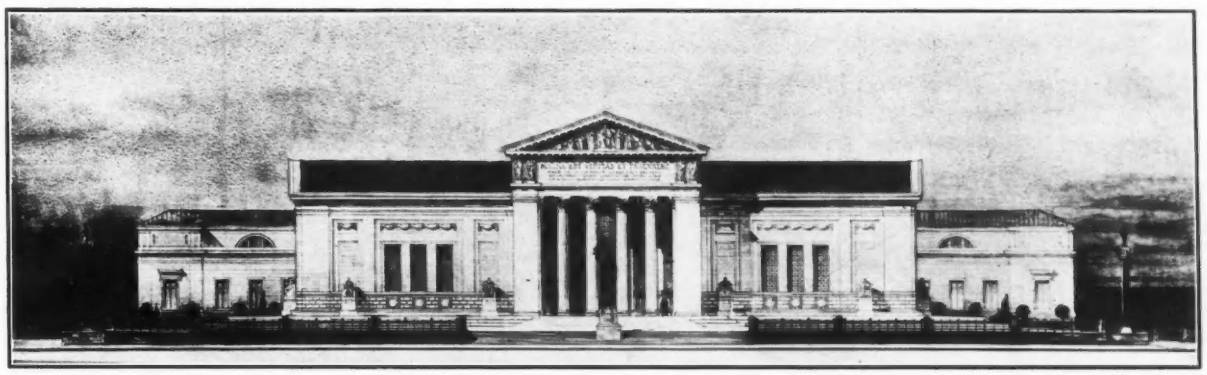
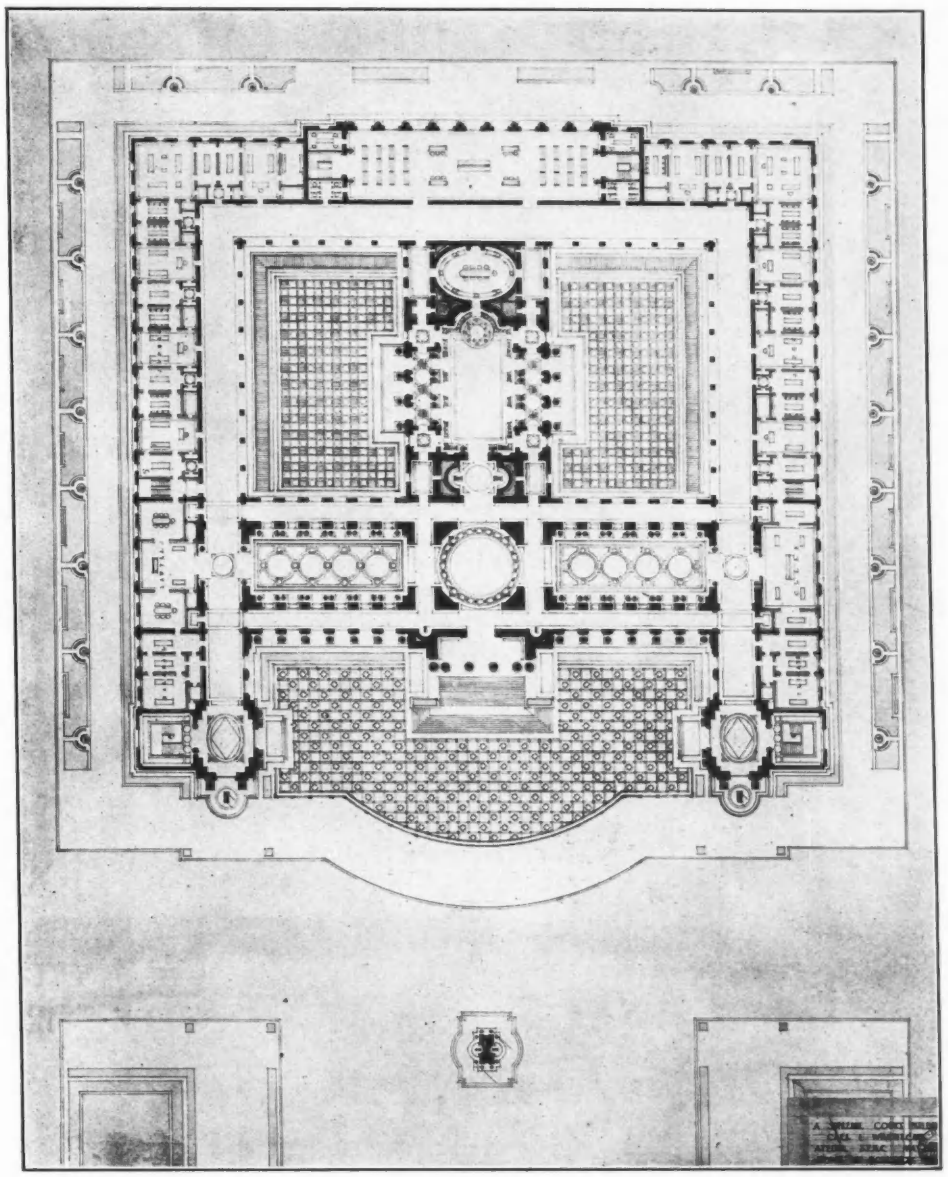


Photo by Gabriel Moulin

Building for the Supreme Court of the United States.
Stafford L. Jory, Placed Second, Scholarship Competition,
First Medal, S. B. A. A.
Atelier University of California.



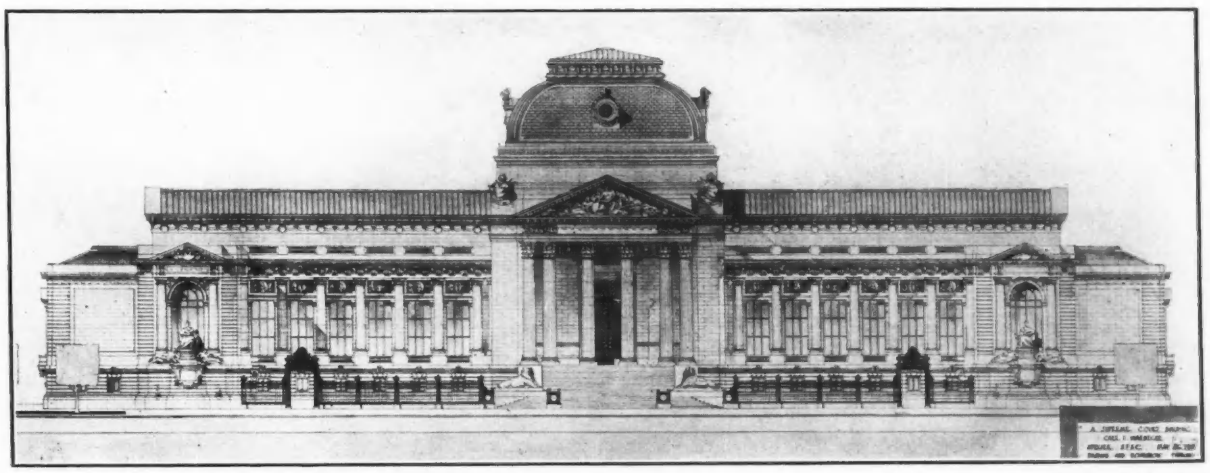


Photo by Gabriel Moulin

Building for the Supreme Court of the United States.
Carl I. Warnecke, Placed Third, Scholarship Competition,
First Medal, S. B. A. A.
Atelier Brown-Bourgeois.

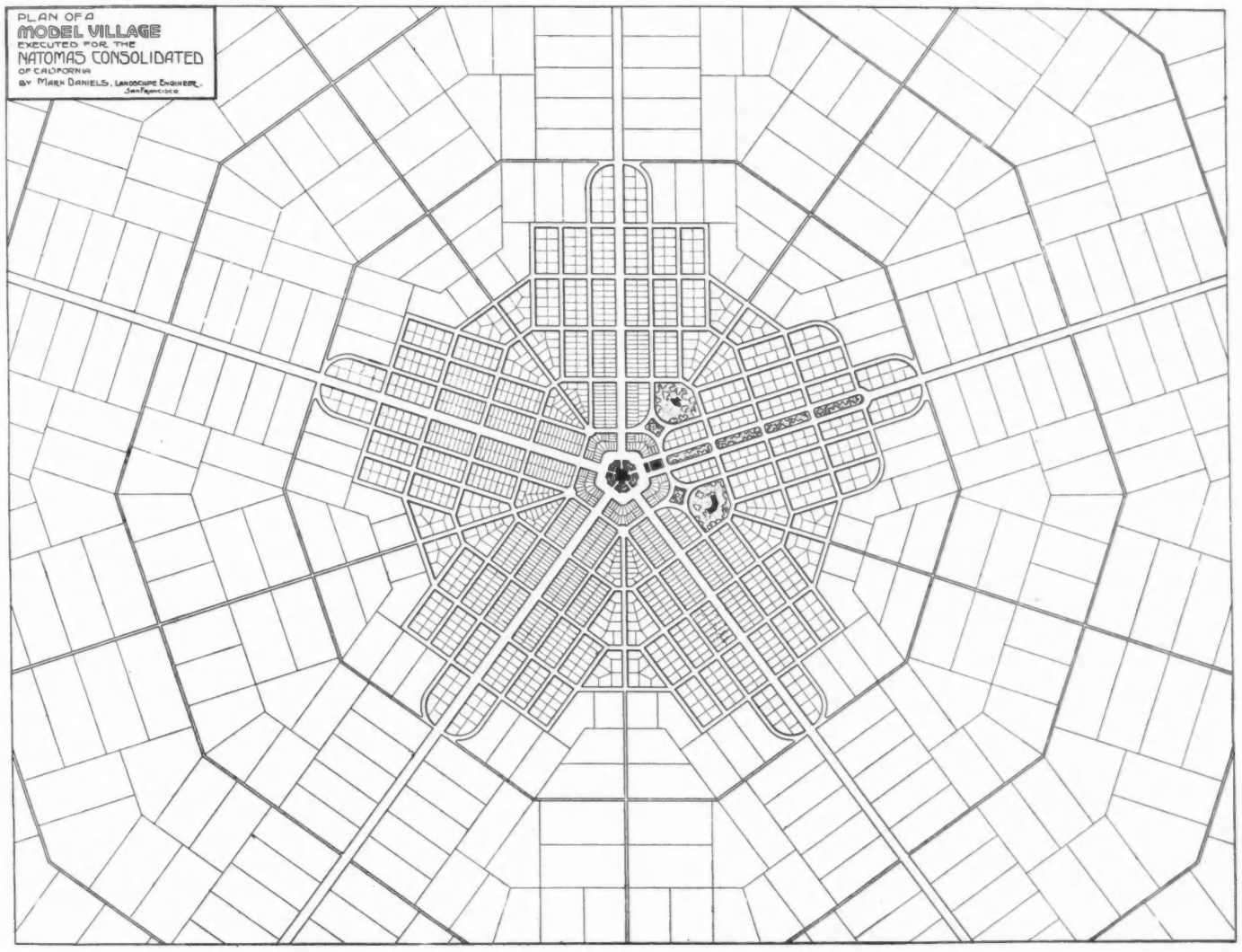
Town Planning

By MARK R. DANIELS

THE SCIENCE of town planning has developed as a product of the need of better conditions commercially and esthetically in our rapidly growing communities. It is not, as has been thought by many, a subject taken up only from the standpoint of beautification and adornment, but one that is now being considered from the angles of commercial efficiency, increased and simplified inter-communication, and the enhancement of property values and city income.

It has been established beyond doubt that the tendency of modern civilization is at present at least toward a concentration of population in the cities, and with this tendency have come traffic problems, transportation problems, questions of public health, and many serious menaces to the happy existence of the people. For this reason it has become essential that conditions governing the growth of cities be investigated and studied to the end that higher efficiency shall be attained in all phases and walks of life.

It is quite evident that in order to thoroughly understand and appreciate the needs of any community, a general knowledge of the forces controlling the development and growth of communities in general is necessary. Problems such as the theoretically correct relative positions of wholesale districts, retail districts, warehouse districts, executive centers, commercial centers and residential centers, are continually confronting us in the layout of new towns and in the study of means for improving towns and cities already extant, and this



and other problems are simplified to a degree by a knowledge of the forces creating cities.

The four forces now active in the creation of towns and cities are commerce, politics, manufacturing and social forces. Any one of these or a combination of any two or more may suffice as a nucleus about which a town may spring up. In towns and large cities all of these forces are present and active, each one developing about some center and growth of population. A town may spring up about a manufacturing industry. In time a residential section will be built, a warehouse and wholesale district may develop, followed by the gradual

establishment of the financial and executive centers. Viewed in a certain light it may be seen, then, that every large city may be divided into its various departments, with centers of activity in each well established. The principal problem of town planning is the facilitating of intercommunication between these various centers in such a manner as to give a minimum amount of travel necessary, while preserving and developing as much as possible the esthetic and beautiful side of city life.

Many methods of planning arteries and streets for a town have been developed, all figured to accomplish these results in a manner as nearly theoretically perfect as possible. The three most generally known systems are the radiating system, the checkerboard system and the checkerboard system with superimposed diagonal arteries, which latter combines the merits of the checkerboard system and the radiating system. It has been the general consensus of opinion that the latter is the most efficient as regard intercommunication, but is more extravagant of land and more costly of operation and maintenance. The tendency of the radiating system such as Paris and Karlsrhue is to develop a strongly centralized area of activity and property values which often results in serious concentration of traffic and does not solve the problem of different centers. The effect of the checkerboard or gridiron system is to develop axial growth, which results in a slightly better distribution of property values and traffic, but results in a great waste of time and energy in intercommunication between centers. Cities such as New York, Philadelphia and Chicago fall in this category. The gridiron system or checkerboard system, with the superimposed diagonals, seems to solve the problem by allowing of direct intercommunication along the diagonals between centers, and at the same time leaving the property enclosed with these diagonals cut in a very regular shape. Washington, D. C., is the most perfect example of such planning and has been maintained by many as the most perfect arrangement for city growth. However, none of these systems has as yet been proven to be the perfect plan.

A plan recently developed by Mr. Griffin, a young Australian architect, for the capital of Australia, seems to be one of the closest approximations to an efficient street system yet devised. In this plan each center has been located with regard to the topographical conditions considered in the light of the purposes to which they were to be put, and direct arteries planned between these centers. About each center was tnen planned an individual system of streets in just such a manner as they would have been planned had each of these centers in itself been the nucleus for a town of that particular character. For example, the manufacturing center was chosen where the topographical and climatic conditions seemed most advantageous, and about this manufacturing center was planned, in either hexagonal or octagonal shape, a system of streets covering sufficient area to conduct a small population. Similarly, the executive, civic, retail and residential districts were chosen, and about each center was developed a system of streets either on the octagonal or hexagonal layout. As the street system about each center developed and expanded, it merged eventually into the street systems about the other centers. The result was direct intercommunication between centers by the way of main boulevards, with a more or less gyratory or a circular system of street about each center.

The plan accompanying this article is one of a village designed by the author, which might be considered as a single unit in the plan of a large city. This plan was executed for a small town in which it was considered advisable to concentrate the business and executive center in one small area, about which the town should grow. It might, however, be taken as the plan of a strictly residential section in a large city, in which case the central point could be well adapted to some form of adornment consistent with the district.

The plan here shown is what the author terms a "five-point plan," in other words, a plan based upon the intersection of five radiating main arteries. The advantages of such a system are, first, the terminating of each artery by a structure; second, no arteries passing through the center on a straight line, obviating the necessity of going around a central point to continue in one direction; third, the obtuse angles at which streets intersect. Had this plan been executed with six or eight radiating arteries, the angles between these main arteries would be acute, and would also necessitate passing around and about the structure in the center, which, in this instance, is preserved for the courthouse. The esthetic value of such a plan is perhaps the most attractive, for, as may be seen, it is possible to terminate the vista of each and every street with some object such as fountains, parks or public buildings without materially interfering with the flow of traffic, and at the same time obviating the necessity for traffic to turn any acute angles or few angles which are as small as ninety degrees. Upon analysis it will be found that in such a plan seventy-five per cent of the traffic between any points or districts will be accomplished in a distance which is not over fifteen per cent greater than a straight line between these points. In order to accomplish this result in the checkerboard system with the superimposed diagonals, it would be necessary to plan so many diagonals that the area consumed thereby would seem to be almost prohibitive. The objection to such a plan as the one here shown is the concentration of traffic and property values in a very small area. It is the belief of the author that the closest approximation to a perfect city will be the development of a plan based upon the radiating system into the five point intersection and connecting centers by means of these main arteries, and developing the arteries about the centers with a gyratory street system. Such a system permits of the minimum amount of traveling and intercommunication and offers a maximum number of focal points and termini for vistas.

Perhaps there is nothing so uninteresting as an endless street along which are built monotonous rows of buildings. If it is possible to plan a system of streets such that a minimum number of structures may serve to terminate a large number of street shedding their charm along many vistas, no effort should be spared to accomplish such results.

To Protect Records

In order to protect the valuable records of the government from danger by fire Congress has made an appropriation for the installation of a modern system of auxiliary fire protection for three of the largest buildings occupied by the Department of the Interior in the city of Washington. A committee has been appointed to investigate the relative merits of systems adaptable to the buildings of the Department and to prepare plans and specifications. All communications regarding the subject should be addressed to the Chief Clerk of the Interior Department, Washington, D. C.

The Architect and His Work

Work is but the visible expression of the inner feelings of the workman, says "Building Progress." Nature has so endowed us that we work out in permanent form some of the finer feelings of our being. Naturally, we have different modes for expressing our thoughts. The sculptor models his in clay or carves them from stone; the musician expresses his feeling in a flood of melody; the writer puts forth his best efforts in the authorship of books; illustrators and artists draw or paint their fancies, and architects give vent to their feelings, not in the design of buildings, but in creating them out of the rough materials at their command.

An artist draws a pretty picture and his work ends there. His work is judged by the impression that picture makes on those competent to judge art and its works. The architect puts his ideals on paper, and his work is then but commenced. He is judged, not by the layout of the plans, the design of the mechanical installation, or the beauty of the elevations, but on the building itself when it is completed. Very few people see the plans and must of necessity judge the architect by the building he has erected; besides, the owner did not engage him to draw a set of plans. Those are but incidental to the real work, and to guide the workmen. The architect is commissioned first and foremost to erect a building of some kind.

The architect who does not feel for his work and long to give expression to his ideas in enduring form can no more be successful than the musician who plays by rule or note. He might be an architect by profession, but he is not an artist in building, and will rightly take his place among the artisans of his calling.

The artist succeeds because he has no one working with him to help or mar his efforts. The architect, on the other hand, is dependent on others to carry out his ideas, and his success in picking the right men determines the success or failure of an operation. Among the contractors in every line there are artists and artisans, just as there are in the architectural profession. The artists feel for their work, take pride in what they do, and are satisfied only with perfection. Such men are like chords in a harp, which vibrate in sympathy when other chords pitched to the same key are struck; and for the successfull construction of a building, for the proper working out of the ideas of the artist-architect, the contractor must be in harmony with him, in feelings, in pride and in ambition. In turn, artist-contractors generally have working for them artist-workmen, and so the chain of sympathy and harmony is complete, from artist to laborer.

The part played by contractors in the erection of a building can not be over-estimated by the architect. They are the tools by means of which he executes his dreams and carves out his future. Indifferent contractors or workmen can destroy the beauty of the best building ever planned, and the architect will be judged by the work as they leave it, not by the artist's dream he started out to transmute to brick and stone.

It is service, then, more than work or price, that an architect must look for from a contractor. A contractor might be honest and reliable, but wholly lacking in artistic taste or sympathy, so that, though willing to do so, he is incapable of carrying out the wishes of the architect. Many an architect has had trouble with just such men, and the result has always been a compromise. And compromises are never satisfactory to any one. Just pick out a superior bit of architecture somewhere, in which every minute detail shows the fine Italian hand of an artist, and fancy what a discreditable botch the same building would have been, wrought from the same design, but by inferior workmen. The difference would measure the one short step from the sublime to the ridiculous, for plain ordinary buildings can stand the tool-marks of the botch without jarring on the sensibilities much better than can a building of architectural pretension. It is the contractors that work for an architect who determine his failure or success in the calling and give him his standing in the community. An architect must be a dual personage: an artist by instinct and a builder by training. If he fails in the second capacity, he is as much a failure as though he were no artist; but lack of ability in that line can be, and is, remedied by surrounding himself with builders only who are in harmony and sympathy with his efforts, and can supply the qualities he lacks.

As the architect receives the credit for all good and artistic buildings he erects, conversely he receives the blame for and suffers from the failures on his operations. One architect the writer knows of, in an evil moment, let a contract to an unknown and untried bidder. The building fell down before it was completed, killing many and injuring more. Now, the design of that building was all right, and the failure was due entirely to faulty construction; yet it was the architect, and the architect only, who suffered by the failure. As the one in supreme charge, perhaps, that was right, for he should have selected his contractors with greater caution. Nevertheless, it was rough on the architect to be pilloried in all the papers as incompetent and have his business, the effort of a lifetime, ruined by a contractor who escaped without penalty.

Sometimes the architect is swayed by the owner on account of cost, the natural desires of owners being to keep down the cost, and often placing price ahead of service, believing in their innocence that so long as there are plans and specifications to go by, all contractors must do the work alike. That is where a firm stand must be taken by the architect if he is to avoid after-trouble. When everything else fails, if he will insist upon the owner assuming all responsibility for the finish and stability of the work in case contractors of his choice are given the work the owner will think twice before signing such a stipulation.

A lesson can be learned about team work by viewing the methods of the biggest and best architects in the country. To gain the privilege of estimating in their offices in the first place, the applicant must prove his right to be considered in the class of reliability, responsibility and quality. Then, by a process of elimination, those who are not in harmony or sympathy with the methods in vogue at that office are dropped from time to time as this fact is discovered, so that competition is restricted to those who will do the work, and do it right, if awarded the contract.

✧ ✧ ✧

Displacing Stairs

Stairs are being displaced in tenement buildings in eastern cities. In St. Paul, a three-story building containing twenty-four apartments is being constructed in which an inclined way in place of stairs will be used. It will rise four and a half feet in thirty, with one turn to the incline between floors, making a nine-foot rise in sixty feet used to pass from one floor to another.

School Ventilation

(A paper Read Before the City Council by a Local Architect)

AIR for schoolrooms and auditoriums should never be passed through furnaces for the reason that furnaces are liable to warp and get out of shape and when this occurs the gas from the combustion of fuel leaks into the fresh air ventilating currents and poisons the air in the schoolrooms and causes a disturbance of the nervous systems in the pupils. They become drowsy, stupid, have headaches, and, if long continued, become infected with catarrh and eventually consumption. It has been stated by eminent authorities that nine-tenths of all cases of catarrh are caused by bad ventilation in schools. Catarrh and consumption are never caused by good ventilation.

Furnaces are installed by two kinds of heating contractors, one dishonest, and one presumably honest. The dishonest heating contractor will install a light-weight furnace and place in faulty ventilating ducts, or ducts of insufficient sizes. The light-weight furnaces will average 1,200 to 1,500 pounds in weight. They usually last one year and do well if they give service that long, but every year they are continued in service from the very start they become a menace to the health of every child attending a school where such a furnace has been installed. True, the furnace may have been installed by an expert in heating and ventilating, and air forced into the different rooms with a large fan driven by the latest electric motor, and the daily papers tell of the wonderful heating and ventilating plant installed by so and so in such and such a school, and the school board fondly believe they have purchased the best possible for the taxpayer and his children. But the truth is they have truly made their school building a breeding-place and hotbed for disease. It takes a child of strong constitution to stand the shock of this kind of ventilation. If it came to a question of the survival of the fittest it might be of some value, but most children struggle through it and some of them have the effects with them all their lives of the refined cruelty caused and inflicted by the dishonest but smooth heating and ventilating expert and his wonderful defective apparatus.

The honest furnace, weighing not less than 2,500 to 3,000 pounds, will be installed by the heating contractor who really wants to give value received. This furnace may also have a fan to force the air in the rooms which will also be driven by the latest style electric motor. This furnace, being of heavy weight, of superior construction and installed by a heating contractor (who may not know so much when it comes to a scientific explanation of air currents to a listening school board), gives fairly good service, due more to the honesty of the heating contractor for really being honest enough to buy and install a superior furnace built sufficiently strong and substantial to stand the severe strain of the furnace fire without starting the joints so that the combustion gases could not mix with the fresh air ventilating currents going to the school rooms for breathing purposes. While this kind of a furnace will give fairly good service it is not wise to install furnace heat, both on account of the risk of poisoning the ventilation and the danger from fire. Also it is the most expensive heating system for fuel. One or two heating seasons supply of fuel alone will pay the entire cost of installing a first-class steam-heating plant.

The accepted and authorized system of school ventilation by eminent authorities is the passing of the air currents over steam coils at a temperature of 85 degrees F., reaching the breathing line at a temperature of 68 to 70 degrees F. in the school rooms. The air being forced into the rooms with a fan driven either by an engine or electric motor; thirty cubic feet of fresh air per minute per pupil, being the minimum amount required. One advantage the steam coils have over the furnace system is the fact that there is absolutely no chance for the ventilating air currents being poisoned by combustion gases. The steam boiler would be outside the building and many feet away from the fan chamber. The steam being carried to the fan chamber by large steam pipes. There is this danger, however, the air may be overheated, that is to say above 90 degrees; 85 degrees being the most that air to school rooms should be heated. The boiler and steam coils should be of sufficient capacity for heating the air to 85 degrees, allowing thirty cubic feet to each pupil per minute; the air to flow into the rooms at a velocity not exceeding seven feet per second.

If the proper size boiler has been installed with sufficient radiation surface and the air brought at a height from the ground of at least fifteen to twenty feet, an ideal heating and ventilating plant, meeting the approval of every-day practice, will result.

However, notwithstanding, this is not the ideal ventilating system par excellence. The proper way to warm and ventilate a school room is to bring the air direct into the school room through housed radiators from the outside and sucking the foul air from the school room with a fan—instead of forcing the air into the room with the fan. Just reversing the operation so to speak. The advantage of the direct indirect fan-drawn air is the fact that there is no danger of overheating as the air passes directly into the school room through the radiators and is not warmed to more than 75 to 80 degrees. Consequently the air comes into the school room under more normal conditions, which makes for better health of the pupils than fan-forced air at much higher temperature. Please understand the more air is heated the more it becomes rarefied and expanded; consequently gets away from the very results desired.

By exhaustion sucking the air from school rooms the windows can be opened in warm weather and still the fan draws the foul air from the school room, even when it is practically an open-air school room. You can never do this with a fan system that forces air into the school room. When the windows are closed you can draw your fresh air through the radiators and bring directly and at once to the pupil air heated to the right temperature and do it with less expense than any other system known.

Air for school rooms and places for public assemblages should be brought from a height above the ground to insure its purity from dust.

Air for school purposes should never be warmed more than 85 degrees F., when passing over steam heat coils.

School Ventilation

The ventilating air currents passing over hot iron or steel plates of the furnace to be heated meets with the temperature of these hot plates whatever it may be, and most generally it is as high as fifteen hundred degrees and often more. These red hot plates precipitate the oxygen in the air forming oxides of iron on the iron plates. The air being heated to many times the breathing temperature of school rooms is much disturbed and its good qualities taken away from it before it reaches the school room. This fact alone is the cause of many cases of nose, throat and lung diseases. Then when you add another factor to the overheated air, which is generally lost sight of altogether, and that is the leakage of combustion gases from the combustion chambers of the furnaces, especially light-weight furnaces. This com-

bustion gas from the fire, leaking into the ventilating fresh air currents, adds poison in its most insidious form to the already many times overheated air which is being forced into the school rooms, with a power driven fan. It would be better to have no furnace and no fan, and a simple direct indirect system of steam heating in the school room, with fresh air inlets to radiators, or open windows where the child will get at least ten to fifteen cubic feet of good air per minute, than to get thirty cubic feet of many times overheated, expanded, rarefied, moisture extracted air, poisoned with what gas may leak into the ventilating currents from the combustion.

The air in passing over steam coils in a steam-heating system also comes in contact with the hot radiator plates. As water boils at 212 degrees F., when steam begins to form, it is safe to say the air passes over coils heated to 300 to 500 degrees F., so that in steam-heating systems the ventilating air currents passing over coils, never reach that degree of heat and disturbance and never get poisoned with combustion gas as with the furnace systems.

Tests of furnace air entering school rooms should be frequently made to determine whether gas is leaking and mixing with the ventilating fresh air currents; and the furnace joints looked after. Tests should be made of the quality of air entering a school room—quality is just as much of an essential to health as quantity, and it is much better to have pure air even if it is necessary to open the windows to get it.

It has been shown in a number of cities that open-air school rooms have proven highly successful. The pupils using them studying harder, learning more, have better health, and more energy in them than children of closed window, air-heated school rooms. The time has arrived when open-air windows are being installed in new buildings so that the entire window opening can be utilized and the rooms converted into fresh-air school rooms in a moment's time. The present old style sliding windows permit of only half the window being opened, but it is much better to get the windows half opened and have a half-way fresh-air school room than a poisonous, gas-laden, vitiated-air, closed-window school room.

Poisonous Gases From School House Furnace Heating

Due to the light weight of material used (steel or iron) in the construction of cheap furnaces, the parts becoming overheated they will expand, loosening the rods and bolts holding together the firebox which becomes viciously defective by the separation between the firebox and hot-air ventilating ducts upon which the hygienic integrity depends, and become badly loosened, warped or broken. As a result the entire occupants of the school room are bathed in an atmosphere of dilute flue gases. This produces the sensation of oppression. Other mental disturbances are said to be typical of acute carbon monoxide poison; causing headache, throat irritations, coughs and even diphtheria; also insomnia is caused by this tainted atmosphere.

Flue gases contain especially when the combustion is incomplete, considerable amounts of sulphurous oxide and carbon monoxide, both distinctly poisonous and dangerous gases.

The hot air furnace, often praised for its ventilating effects, when properly operated and in perfect condition, may at any moment become a distinct menace to health.

The "old school doctors" yet claim that diphtheria is induced and augmented by kerosene lamp combustion, which emits the same kinds of gases as an imperfect furnace does.

Air, Composition of

Air is not a simple substance but a mechanical mixture. Oxygen and nitrogen are present very nearly in the proportion; one part oxygen to four parts of nitrogen by weight. Carbonic acid gas, the product of all combustion exists in the proportion of three to five parts in ten thousand, in the open country. Water in the form of vapor varies greatly with the temperature and the exposure of the air to open bodies of water. In addition there are generally present in variable but small quantities, ammonia, sulphurated hydrogen, sulphuric, sulphurous, nitric and nitrous acids, floating organic and inorganic matter, and local impurities. Air also contains ozone which is a peculiar active form of oxygen. Also constituent gases have been found in small quantities.

Air Required for Ventilation

The amount of air required to maintain the standard of purity of the school room can be very easily determined provided we know the amount of carbonic acid given off in process of respiration. Experiments show that the average production of carbonic acid by an adult person at rest is about .6 cubic feet per hour. If we assume the proportions of this gas as 4 parts to 10,000 in the external air and are to allow 6 parts to 10,000 in an occupied school room, the gain will be two parts in 10,000 or in other words there will be 2-10,000 equals .0002 cubic feet of carbonic acid mixed with each cubic foot of fresh air entering the room.

Therefore, if one person gives off .6 cubic feet of carbonic acid per hour it will require .6 divided by .0002 equals 3,000 cubic feet of air per person to keep the air in the room at the standard of purity assumed, that is, 6 parts of carbonic acid in 10,000 of air.

Therefore, if the ventilation from artificial means is defective and supplies a heavy percentage of carbonic acid, carbon monoxide, sulphurous oxide and other poisonous gases, together with many times over-heated, expanded air, persons in an occupied school room are in constant danger of a breakdown in health, causing numerous diseases which in many cases will follow them through life.

Architects Cannot Claim Mechanics' Lien

According to a decision rendered by Judge McInnis in the suit of R. McKay Fripp, architect, against H. Clarke, to recover on a lien in connection with the preparation of plans for a residence, an architect in British Columbia, under the existing statutes, can not recover under a mechanics lien.

Mr. Fripp claimed a lien for payment for the preparation of plans and specifications for a residence being erected in Point Grey. His Honor decided adversely to the claimant. Up to the present time it has been assumed that an architect could claim a mechanics lien judgment in common with the other trades identified with building construction.

His Honor, in giving judgment, pointed out that the Ontario act was much broader than the British Columbia statute, and that an architect's claim to a lien could not be successfully established in this province, in his opinion.

The point is a new one in British Columbia. A case was heard some time ago where an architect sued for a lien, amounting to some $6000, in connection with the Leigh Spencer building, but the issue as to the architect's statutory right to claim a lien was not taken.

New American Architecture

An Interesting Comparison of Some of the Old and Insurgent School of Design

In an interesting article on some of the bold things that Western architects have undertaken on their own initiative, and especially "the out-of-the-ordinary style that has been developed by the Chicago School of Architects," Charles S. White in writing for "Country Life in America," sets out the following parallel column comparison of the ideas of the conventional and "insurgent school" which will interest all house designers professional or otherwise:

Insurgent

(1) Main floor frequently consists of three rooms—living room, dining-room and kitchen. Frequently these three are contained in one large room, with wings for dining-room and kitchen, screened from the living room. The library is usually part of the living room, and all parts of the house are in close inter-relation instead of each being partitioned separately.

(2) Floor plans and elevations are in harmony, that is, the exterior of the building reflects its interior arrangement, so that one viewing the building from outside might guess its interior arrangement.

(3) Rooms are often "articulated," that is, each department if the house is in a separate wing, the kitchen being separated from the dining-room wing, the living room from the kitchen, and so on.

(4) Windows, arranged in groups—usually casements, opening outward.

(5) Windows and window groups are often integral features of the structure. A house is constructed around the windows.

(6) Interior walls and ceilings are usually tinted and treated architecturally with casings, moulded or plain, applied to the walls in patterns dividing each wall into one or more panels. Pictures are used sparingly for decoration, and then in many cases they are murals, applied architecturally.

(7) Furniture is usually designed especially for the house, ordinarily commercial, "ready made" furniture being unadapted to these rooms.

(8) Frequently houses are built on a stone, concrete or wooden base, there being no "water table" or underpinning line between ground and first floor.

(9) Decorative glass is largely used at windows, consisting of conventional, geometric, or flower forms patterned in metal-bar or grille.

(10) Facades are frequently made up of piers, with curtain walls between, pierced by running groups of windows. Horizontal lines of cornices, window sills and window caps are frequently accentuated by extending these lines entirely around the building.

Regular

(1) Any number of rooms is provided, including hall, living room, dining-room, kitchen, reception room and library. Each room is separated from others by partitions, though often connected by means of wide openings.

(2) In the best work of the regular school there is a close relation between the outside and inside of the building, though not so intimate as in insurgent architecture.

(3) The floor plan is usually conceived as a sequence or rooms arranged within a parallelogram with or without wings.

(4) Windows, single or in groups; may consist of ordinary windows, casements, or both.

(5) Windows and window groups float on a background formed by the walls of the house wherever the exigencies of the problem or the fancy of the designer dictate.

(6) Interior walls and ceilings are treated in hundreds of different ways—sometimes with wall paper or tint, frequently with wood panels or beams. Pictures are framed and hung as desired.

(7) Any tasteful furniture may be used, though sometimes furniture is made to order, as in insurgent houses.

(8) Houses are of all types, some with and some without an underpinning.

(9) All sorts of windows are used, chiefly plain glass.

(10) Facades are handled in the variety of ways familiar to most observers.

Inaugurate "Grouch" Meetings

Financial Secretary Hughson, of the Portland Builders' Exchange, has inaugurated a novelty. This he denominates a "grouch meeting." The first was held July 10th at 8 p. m., characterized on the bulletin board: "One grouch apiece and no back talk." The object was to form a sort of "get-together" session, wherein petty differences might be adjusted to bring about harmony. Director Bullock perpetrated an original poem on the occasion.

Gothic

The term Gothic is so associated in our minds with the wonderful cathedrals of medieval Europe, with the pointed arch, with foliated circles, with grouped and clustered mouldings, with the ribbed vaulting and the masses of vivid, even though rude carving; the word is so full of meaning in all its associations that it is difficult to realize that the word "Gothic" first appears in English about the close of the seventeenth century, and then as a term of disesteem. It was used scornfully by such men as Evelyn, in his diary, and even Sir Christopher Wren, master architect that he was, seemed to have no appreciation of the medieval worker.

The Renaissance builders had coined the term much earlier. It is curious to read Vasare, where, speaking of the style "invented by the Goths and Vandals who overthrew the Roman Empire," he says: "There arose new architects, who, after the manner of their barbarous nations, erected buildings in that style which we call Gothic."

To us, Gothic seems to mean detail and the manner of building, rather than the principle of construction. It means vertical lines, tracery, the pointed arch carried to great height, whether the weight is suspended on slender piers with the thrust caught and divided by the flying buttress, or if the building be really carried by a more or less solid wall and sturdy piers.

We are told, as to its early developments, that, "like all the other nations of Europe, France, and later England, were trying to solve the same problem, that of placing a stone roof on the thin walls of the early Christian basilicas," though we know many of the early roofs were of wood.

Another authority speaks of the rib vault as the generating principle of Gothic architecture, and gives the prosaic reason for its use, that the rib arch could be constructed practically without centering. So the rib vault was invented in Lombardy as a simple device to economize the use of wood.—Construction Details.

Industrial Publications

A half-tone of the Carnegie Library, at Howard University, Washington, D. C., forms the cover illustration for the June issue of "Roofing Tin," published by the N. and G. Taylor Co., Philadelphia. This structure is roofed with 7,500 square feet of 1X "Target and Arrow" roofing tin, manufactured by the N. and G. Taylor Co.

✧ ✧ ✧

A Lincoln Souvenir

Berger Bros., 186 Broadway, recently exhibited in their window a souvenir of President Lincoln, which attracted much attention. A placard, to which was attached a piece of old-fashioned wall paper, bore this announcement:

"This piece of wall paper is from the room in which Lincoln died, April 15, 1865, 516 Tenth Street, Washington, D. C. Presented to Mr. Ben Berger, by O. H. Oldroyal, Custodian, who preserved it while repairs were being made to the room."

✧ ✧ ✧

Another Bed Novelty

President Lawrence Holmes, of the Holmes Disappearing Bed Company, and the inventor of that great modern convenience, has patented and is now manufacturing a new movable upright bed. This may be moved readily to any part of a room, and concealed behind a canopy when not in use. It is unattached, standing on its own base. Hotels and apartment houses, when economy of space is a desideratum, have shown a demand for the new bed. S. B. Cooke, local manager for the company, has the bed on exhibition at the display rooms, suite 422-3-4 Failing Building, and invites public examination. Commendable features regarding this bed include the ease with which it is handled, economy of space, sanitariness and absolute safety.

✧ ✧ ✧

Favors Bennett Plans

Mayor-elect Albee, of Portland, announces that it will be the policy of the city to follow, as far as practicable, the Bennett Greater Portland Plans in future municipal development. By gradually working along these lines much impetus can be given to carrying out the designs suggested by the Bennett plans during the life of the new commission, which will cover the next four years. After such a start has been made, it is not likely that haphazard lines will be followed in the future. Indeed, it is highly probable that future commissions will continue the same policy. Rome was not built in a day, and although we will never trod in the dust of dead Caesars, Portland will gradually be transformed under the Bennett plans into a most beautiful city. "Old things shall pass away and all things shall become new." In the evolution, the Greater Portland of the future, in its wonderful natural settings of snow-capped mountains, verdure-coered hills, stretches of fir-clad areas and two magnificent rivers, will make of it the show city of the Pacific Coast. Could opponents to the Bennett plans carried out, see Portland twenty-five years hence as it will be, they would become enthusiastic converts to the idea.

✧ ✧ ✧

The Man: "What kind of a bungalow can you give me for $3,000?"

Draftsman: "Do you want one to live in or just refer to?"

Vol. 1, No. 45, of the Harriman Magazine, "The Tooter," has been received. It devotes itself to the interest of the Hood River section. It is well illustrated, and the contents are bright and breezy.

✧ ✧ ✧

Portland's Building Permits

The total value of building permits for the first six months of the year were $7,399,895. For the corresponding period in 1912 the amount was $8,798,266. The building permits for June, 1913, were valued at $960,135.

✧ ✧ ✧

There is quite a decided increase in the use of face brick in buildings over the country. The buildings being erected in the smaller towns are using this material to a greater extent than ever before, and its superiority is being generally recognized by all those who have to do with the building business.

The Pacific Face Brick Company, Portland, Oregon, manufacturers, have recently received orders for face brick to be used in the following buildings: Kenton School, Portland, Ore.; Odd Fellows' Building, Tillamook, Ore.; Knights of Pythias Building, Albany, Ore.; Carnegie Library Building, Albany, Ore.; Hospital, Aberdeen, Wash.; Bank Building, Lebanon, Ore.; Title and Trust Building, Portland, Ore. They will also furnish their Hollow Clay Building Blocks for the Piedmont Presbyterian Church in this city.

✧ ✧ ✧

Portland's Lumber Shipments

A study of the figures covering Portland's lumber shipments for the past three years is of interest. For the fiscal year ending June 30, 1913, the total exports were 145,509,871 feet, valued at $1,712,047; for the fiscal year 1911-12, 88,244,430 feet, valued at $960,233; for the fiscal year 1910-11, 104,056,876 feet, valued at $1,249,354. The coastwise shipments for the fiscal year 1912-13 were 196,780,604 feet; year of 1911-12, 164,923,690 feet; year 1910-11, 108,087,482 feet; year 1909-10, 102,891,200 feet. The grand total of lumber shipments, export and coastwise, for the fiscal year of 1912-13, amounted to 342,290,475 feet; year of 1911-12, 253,168,120 feet; year of 1910-11, 212,144,358 feet. Portland shipped out to foreign countries and to California ports from July, 1910, to July, 1913, the enormous total of 807,602,953 feet—ample proof that it is the greatest lumber shipping port in the world. The shipments for June, 1913, amounted to 35,396,417 feet.

✧ ✧ ✧

In the fireproof shafts of a Parisian theater concrete spiral stairways for the use of firemen have been installed.

✧ ✧ ✧

STATEMENT OF OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., OF THE PACIFIC COAST ARCHITECT,

Published Monthly at 725 Chronicle Bldg., San Francisco, Calif.

Recently moved from 803 Lewis Bldg., Portland, Oregon.

Manager, Secretary and Treasurer.....J. A. DRUMMOND
Publishers.....COAST PUBLISHING CO., Inc.
725 Chronicle Bldg., San Francisco, California.

The owners holding one per cent or more of stock are: J. A. Drummond, A. M. Flynn, Frank O. Creasey. There are no bondholders, mortgagees or other security holders.

J. A. DRUMMOND.
Manager, Secretary and Treasurer.

Sworn to and subscribed before me this twenty-first day of July, 1913.
(Seal) PERCY E. TOWNE,
Notary Public, San Francisco County, California.
My commission expires Jan. 16, 1916.

The American Rolled Gold Company of Providence, R. I., has the contract to place $30,000 in heavy gold leaf upon the copper roof of the tower of the new Woolworth Building, in New York. Cass Gilbert, the architect of the building suggested this lavish adornment.

✧ ✧ ✧

Plumbers Active for Comfort Stations

The state association of master plumbers of California recently became active in a campaign to secure the establishment of public comfort stations and the installation of sanitary public drinking fountains and other necessities in every city of the golden state. The executive board of that organization, including Frank J. Klimm, president; Edward W. Crowell, vice-president; Wm. F. Wilson, treasurer; Thomas Haverty, William Rowe, Charles H. Julian and John Cahill, trustees, and John L. E. Firmin, secretary, is presenting to every municipality in the state of California, the matter of the importance of adequate sanitary appliances, and particularly the desirability of the establishment of public comfort stations. In a recent communication signed by the state association of master plumbers of California, by its executive board, addressed to the mayors of every large city in the United States, it was stated:

"This is most respectfully addressed in the belief that you realize that public conveniences or comfort stations and sanitary public drinking fountains, are sanatory and sanitary necessities; that they exert a powerful influence in the advancement of morality, and that the necessity for these public utilities is proportionate to the density of the population of a community.

"The California Master Plumbers' Association is carrying out a campaign for the purpose of bringing this important subject to the attention of municipal and other authorities throughout the United States, and desires to learn what has been done in your city, and what is in contemplation relative to public convenience stations and drinking fountains."

To this communication to the mayors to whom it was addressed was attached a blank form of questions with provisions for answers, which covers every phase of the subject of public convenience stations and drinking fountains. By possessing this data, the state association of California will be able to "show the way" of modern and progressive sanitation in every city of the United States to the municipalities of a state which is favored with an aggressive and progressive association of master plumbers. This action on the part of the California association is one of interest to the whole plumbing industry.

✧ ✧ ✧

Personals and Trade Notes

C. E. Troutman, an architect of Aberdeen, Wash., was a recent visitor in Portland.

The firm of Reid Brothers, Architects, is now represented in this city by Mr. Watson E. Reid. Their office is as formerly, in the Yeon Building.

Walter Claussen of the architectural firm of Claussen & Claussen is on an extended trip through British Columbia.

Architects Bebb & Mendal have returned to their former location in the Denny Building, Seattle, which was recently partially destroyed by fire. They are in suite 503.

Architect A. P. Merrill, who was formerly located at 728 Tacoma Building, Tacoma, is now located at 411 Savage-Schofield Building.

John M. Godwin, Architect, has opened offices in suite 84, Hutchinson Building, Vancouver, B. C.

Prof. R. H. Dobell, head of the Department of Architecture at the Oregon Agricultural College, was recently in Portland.

The Columbia Brick Works will furnish the partition tile for the Northwestern Bank Building and Pittock Block.

The Oregon Dennison Block Co. has been awarded the contract for interlocking hollow tile for two dry kilns to be built for the Booth Kelly Lumber Co.

The Oregon Dennison Block Co. received the contract for the interlocking hollow tile to be used in the warehouse of the Rogue River Fruit & Produce Association at Medford, Ore.

J. A. Drummond, Pacific Coast representative of the N. and G. Taylor Company, Philadelphia, has returned from a successful business trip through the Northwest. Mr. Drummond's headquarters are 725 Chronicle Building, San Francisco.

Architect Lyman Farwell, Los Angeles, Calif., has opened offices at 617 Storey Building. Mr. Farwell was formerly associated with Architect O. P. Dennis, with offices in the Fay Building.

Architects Otto H. Neher and C. F. Skilling, Los Angeles, have moved their offices from the Pacific Electric Building to 708-09 Garland Building.

Architect Robert D. Farquhar, with offices in the Van Nuys Building, Los Angeles, is on an extended visit to Italy, France, Spain and the Mediterranean countries, combining pleasure with a study of early European Architecture.

Architect L. C. Mullgardt, with offices in the Chronicle Building, San Francisco, has returned from an extended trip to the Eastern states.

Architect G. Albert Landsbury, with offices in the Gunst Building, San Francisco, has returned from a business trip to Salt Lake.

Thos. Bilyeu, President of the Portland Concrete Pile Co., with headquarters in Portland, Oregon, was a recent visitor at their San Francisco office.

Architect Thos. W. Mawson of London, England, is in Vancouver, B. C. Mr. Mawson designed the plans for the improvement of Stanley Park.

Architects Horel and Roberts, Vancouver, B. C., have moved their offices from the Dominion Building to new quarters in the Welton Building.

Architect A. Wesley Eager of the firm of Eager & Eager, Los Angeles, is on a trip to his former home at Hamilton, Ontario. The return journey to Los Angeles will be made by way of South America.

Architect Willis Polk is on a two months tour which will take him to England, France and Spain, as special Portola Commissioner.

Architect Walter D. Reed, with offices in the Oakland Bank Building, Oakland, Calif., has returned from a two weeks vacation spent at Truckee, Calif.

The Tuec Stationary System of Cleaning, which entered the vacuum cleaning field in this territory last September, seems to be meeting with much favor. C. H. Wilder, manager, reports having the contract for the Morgan Building, designed by Messrs. Doyle & Patterson; the Platt Building, designed by Messrs. Whitehouse & Fouilhoux, and the Broadway Building, designed by Messrs. MacNaught & Raymond, all of this year's construction.

His Job

"How are the plans for your new house coming along?"

"Splendidly. My wife has finally laid out all the cupboards she wants, and now all the architect's got to do is to build the house around them."—New Orleans Times-Democrat.

✧ ✧ ✧

A Resume

CALIFORNIA

Theater—Berkeley. Architect A. W. Cornelius has plans prepared for a reinforced concrete theater building for Turner & Dahnken. The building will be 173x175 feet in size, and cost $150,000.

Store and Flat—San Francisco. Architect Henry Shermund prepared plans for a two-story frame flat and store building for J. B. Catana.

Club Building—Sacramento. Architect Washington J. Miller has been commissioned to prepare plans for a building for the Native Sons at Sacramento. The building will be either four or five stories in height, constructed of reinforced concrete.

Apartment House—Los Angeles. Architects R. B. Young & Sons are preparing plans for a three-story brick apartment house for Dr. E. C. Manning.

High School—Los Angeles. Architect Geo W. Eldredge has been commissioned to prepare plans for an $80,000 high school for Huntington Park District.

Hotel—Los Angeles. Plans are being prepared by Architect E. W. Bongmeyer for a seven-story hotel for E. Rabin.

Loft Building—Los Angeles. Architect A. F. Rosenheim has completed plans for a five-story loft building for the Bensinger Estate.

Apartment House—San Francisco. Plans are now being prepared by Architects Rousseau & Rousseau for a four-story brick apartment house for Martin S. Shaw, to cost $60,000.

School—Hughson. Architects Stone & Wright of Stockton prepared plans for a one-story $20,000 brick school building.

Bank and Office Building—San Francisco. Working drawings are now being prepared by Architects Stone & Wright for a ten-story steel frame building for the Commercial Savings Bank of Stockton, to cost $150,000.

Office Building—San Francisco. Architect Frederick H. Meyer is preparing working drawings for the eight-story office building for Trowbridge & Perkins. The building will be 67x120 feet in size, steel frame, to cost $200,000.

Hotel—Long Beach. Architects Kysor & Bigger of Los Angeles have been commissioned to prepare plans for a ten-story reinforced concrete hotel with seven hundred rooms for the Oxford Investment Co., at a cost of $700,000.

Residence—Oakland. Architects Milwain Bros. are preparing plans for a $25,000 residence for Mrs. A. J. Larkey.

Residence—San Francisco. Plans are being prepared by Architects Bakewell & Brown for a two-story brick veneer residence for Mrs. L. C. Avaneli.

Physicians' Building—San Francisco. Architects Ward & Blohme have prepared preliminary plans for a twelve-story building to be used by physicians.

Store and Hotel—Fresno. Architects Swartz, Hotchkin & Swartz have prepared plans for a two-story brick building, 50x100 feet in size, to cost $20,000.

Loft Building—Los Angeles. Architects John C. Austin and W. C. Pennell are preparing plans for a thirteen-story loft building for the Mason Estate.

Residence—San Francisco. Architect Kenneth McDonald Jr. is preparing plans for a $75,000 residence for Lewis Saroni.

Warehouse—San Francisco. Plans have been completed by Architects Bakewell & Brown for a three-story brick warehouse building, to cost $55,000, for Orville Pratt Jr.

Apartment House—San Francisco. Plans were prepared by Architect W. G. Hind for a $15,000 apartment house, 44x95 feet in size, for Mrs. Sarah Pickard.

Office Building—Los Angeles. Architects Morgan, Walls & Morgan are preparing working drawings for a steel frame store and office building, 121x150 feet in size, for Wm. G. Keickhoff.

Residence—Berkeley. Architect John Hudson Thomas is preparing plans for a $10,000 brick veneer English residence for Dr. Geo. P. Wintermute.

Fraternity Building—Berkeley. Architect W. C. Hays, San Francisco, prepared plans for a $20,000 fraternity house for the Alpha Tau Ometa Society.

Hotel—San Francisco. Architect Edward B. Seely is preparing plans for a ten-story steel and concrete hotel for Frank W. Bilger. The building will be 50x150 feet in size and will cost $150,000.

Apartments—Sacramento. Architect Wm. Willoner is preparing plans for a three-story apartment house for A. G. Johnson.

Hospital—Los Angeles. Plans have been prepared by Architects Garrett & Farrell for a four-story building, 141x60 feet in size, for the Methodist Hospital Association.

Apartment Houses—San Francisco. Architect Albert Farr prepared plans for a group of five frame apartment houses to be built for the Metropolitan Investment Co. at a total cost of $60,000.

Church—Berkeley. Architect James W. Plachek has completed plans for a $15,000 frame and plaster church.

Machine Shop—San Francisco. Plans are being prepared by Architects Welsh & Carey for a machine shop, 25x70 feet in size, of steel and brick construction, for J. P. Ford.

Apartment House—San Francisco. Architects Falch & Knowles prepared plans for a $12,000 three-story frame apartment house, 25x125 feet in size.

Garage—Fresno. Architects Swartz, Hotchkin & Swartz are preparing plans for a one-story concrete garage of Mission style, to cost $12,000, for Thos. Patterson.

Store and Office—Santa Barbara. Architect J. Corbley Poole prepared plans for a four-story reinforced concrete store and office building, 100x230 feet in size, for John S. Hawley.

Apartments—Fresno. Architects Starbuck & Clark prepared plans for a bungalow apartment house for E. M. Dinson.

✧ ✧ ✧

OREGON

Garage—Architects Jacobberger & Smith prepared plans for a private fireproof garage to be built for Dr. A. J. Giesy.

Residence—Architects Root & Hoose prepared plans for a $5,000 residence to be erected in Laurelhurst for the Investors' Building and Trust Co.

Warehouse—Plans were prepared by Engineer Wm. F. Spring for a $40,000 concrete warehouse and cold storage plant to be erected at Medford, Oregon, for the Rogue River Fruit and Produce Association.

Business Block—Architect W. B. Bell has been commissioned by Fisher & Thorsen to prepare plans for a three-story brick building, 100x100 in size, to be built on upper Washington Street. Will be used for stores and rooming house purposes.

Residence—Architect W. B. Bell prepared plans for a modern $3,000 frame residence for the Rev. Harry Leeds.

School—Plans were prepared by Architect Newton C. Gaunt for a two-story frame school, to cost $15,000, for School District No. 41, Coos County.

Residence—Architects Foulkes & Hogue prepared plans for a $4,000 residence to be built on Portland Heights for James McKinnan.

Summer Cottage—Plans were prepared by Architect R. N. Hockenberry for a modern beach cottage to be built for Harry Hemblet at Gearhart Park.

Bungalow—Architect R. N. Hockenberry prepared plans for a five-room rustic riverside bungalow for Ralph Hahn.

Rescue Home—Plans were prepared in the City Building Inspector's office for a group of eleven buildings to be erected for the Louise Rescue Home.

Store Building—Architect E. E. McClaran prepared plans for a two-story brick and concrete building to be built for J. Jacobson at Gresham.

School—Plans were prepared by Architect George R. Kingsberry for a two-story frame school building to be built at Banks.

Library—Plans were completed by Architects Johnson & Mayer for a Carnegie Library for the city of St. Johns. Will be a one-story and basement brick building of Colonial design.

Flat—Architect E. E. McClaran prepared plans for remodeling a two-story frame residence into a two-flat building for H. E. Harris.

Residence—Architects Claussen & Claussen prepared plans for a two-story frame side hill residence to be erected on Arlington Heights at a cost of $6,500.

Masonic Temple—Plans are being completed by Architect C. C. Robbins for a three-story $40,000 brick building, 80x100 in size, for the McMinnville Masonic Lodge.

Bungalow—Architects Claussen & Claussen prepared plans for a five-room bungalow for Mrs. Letitia Smith.

Factory and Office—Architects Jacobberger & Smith prepared plans for a two-story concrete factory and office building, 60x160 in size, for the Doernbecher Manufacturing Co.

Bank Building—The First National Bank of Forest Grove has commissioned Architect W. B. Bell to prepare plans for them for a three-story stone bank and office building, 50x62 feet in size.

Garage and Dance Hall—Architect Robert T. Tegen is preparing plans for a three-story brick building, triangular in shape, for M. M. Ringler. The building will cost about $60,000.

Bungalows—Architect Earl A. Roberts is preparing plans for two modern five-room bungalows to be erected for the Provident Trust Co. in Rose City Park.

School—School Architect F. A. Naramore prepared plans for a two-story reinforced concrete school building for Sellwood District to cost $40,000.

Residence—Plans were prepared by Jacobberger & Smith, Architects, for a modern two-story, nine-room frame residence for Robert Liese.

Church—Architects Tourtellotte & Hummel are preparing plans for a building for the First Methodist Episcopal Congregation of Roseburg, Ore. Will be a one-story and basement frame church and will cost about $15,000.

Residence—Architect Chas. W. Ertz prepared plans for a $3500 residence to be erected in East Moreland for S. H. Thatcher.

Store Building—Architects Emil Schacht & Son are preparing plans for a one-story brick store building to be erected on Twenty-eighth and Thurman streets.

School—Architects Tourtellotte & Hummel have been commissioned to prepare plans for the Cottage Grove High School. Will be a two-story brick, 60x145 in size, with sixteen class rooms and will cost $40,000.

Business Block—Corvallis. Architect A. C. Jenkins of Albany has prepared plans for a two-story brick building, 100x100 in size, to be erected for Charles Hout.

Business Block—Astoria. A syndicate composed of F. I. Dunbar, T. R. Davies, E. Z. Ferguson and J. N. Griffin have purchased 140 foot frontage in the business district and will improve it with a four-story business block.

Residence—Hood River. Architect R. R. Bartlett prepared plans for a modern two-story, nine-room frame residence for Mayor E. O. Blanchor.

Hotel—Baker. T. A. Barton will erect a two-story brick hotel at an early date.

Hospital—Springfield. Mrs. R. M. Baker is planning to erect a modern three-story hospital building, 38x60 feet in size, at a cost of $10,000.

Bank—Bandon. Architect Benjamin Ostlind of Marshfield has been commissioned by the First National Bank of Bandon to prepare plans for a two-story reinforced concrete bank building, 42x75 feet in size, to cost $12,000.

School—Metolius. Sweatt & Levensque, Spokane architects, have prepared plans for a concrete fireproof school building to cost $8500.

School—Klamath Falls. Architects Veghte & Co. prepared plans for a school building, 28x36 feet in size, for District No. 41.

School—Eugene. Architect J. R. Ford prepared plans for a two-room school to be erected near here.

Bank and Hotel—Sherwood. Frank Cofelt will erect a two-story brick building to be used for banking and hotel purposes.

Lodge Building—Dufur. Architects S. E. Watkins & Son of Newberg have been commissioned to prepare plans for a $14,000 lodge building for the I. O. O. F.

School—Fairview. School District No. 7, Multnomah County, will erect a modern bungalow schoolhouse at a cost of $3500.

Lodge Building—Medford. Architect F. C. Clark has prepared plans for a building for the B. P. O. E. The building will be a two-story brick, 85x85 feet in size, and will cost about $45,000.

School—Culver. Culver school district has voted $6000 bonds with which to erect an eight-room frame school building.

School—Agate Beach. The Agate Beach school district will erect a $3000 schoolhouse.

School—Hillsboro. St. Mathews Church is planning to erect a parochial school on its property here.

School—Gervais. Architect Geo. M. Post of Salem has prepared plans for additions and alterations to the public school building.

WASHINGTON

Remodeling Theater—Seattle. Architect Francis Grant will prepare plans for remodeling the Star Theater at a cost of $70,000.

School—Spokane. Architect Robt. C. Sweatt has completed plans for a $30,000 fireproof school building for Boulevard Park School.

Church—Aberdeen. Architect C. E. Troutman has plans completed for the $15,000 church for the Episcopal Church of St. Andrew.

College Buildings—Pullman. Plans for two fireproof buildings to cost about $300,000 for the Washington State College have been prepared by Prof. Rudolph Weaver of the architectural department.

Library—Seattle. Architect W. Marbury Somervell has completed plans for Yesler Memorial Library. The building will be a two-story concrete, stone and brick structure and will cost $40,000.

Hospital—Juneau. Architect Julian Everett has completed plans for a four-story, 50x100 feet in size, reinforced concrete hospital to cost $60,000, for the Sisters.

School—Marcus. Architects Sweatt & Levesque of Spokane have prepared plans for a $45,000 school building.

High School—Kapowsin. Architects Heath & Gove, Tacoma, have prepared plans for an $8,000 addition to the high school at this place.

School—Castle Rock. The Castle Rock school district has voted bonds for the purpose of erecting a modern high school.

Bank—Seattle. Architects Beezer Bros. prepared plans for a three-story concrete and brick bank building for the Broadway State Bank, to cost $35,000.

Grain Elevator—Endicott. The Endicott Union Elevator Company will erect a concrete grain elevator.

School—Vancouver. Bonds for $5000 have been voted by school district No. 6 with which to purchase a site for a building.

Depot—Steilacoom. Architects Mahon & Merrill, Tacoma, are preparing plans for a $4000 depot for the Northern Pacific Railway Co.

School—Newport. School District No. 1 voted an $18,000 bond issue with which to erect a modern school building.

Hotel—Montesano. Plans are being prepared for W. E. Crist for a three-story concrete hotel to cost $35,000.

Theater—Anacortis. Architect F. S. Piper of Bellingham is preparing plans for a fireproof theater, 60x100 feet in size, for J. A. Mathesen, to cost $20,000.

Church—Spokane. Plans have been prepared by Architect Chas. T. Diamond and accepted by the Church of Truth for a $12,000 church of stone, stucco and half-timber.

Garage—Seattle. Architects Haynes & Cantin have been commissioned to prepare plans for a garage to cost $250,000 for the Madison Square Building Co. The building will be three stories, reinforced concrete, 240x360 feet in size.

University Building—Spokane. Architect H. G. Ellis has plans prepared for the first building for Spokane University. The building will be one story, concrete and brick, 60x80 feet in size.

Hall—Centralia. The Salvation Army will erect at once a two-story brick building at a cost of $15,000.

Business Block—Aberdeen. W. R. Whiteside announces that he will begin work soon on a two-story building to be used as an undertaking establishment with apartments on the second floor. Cost $20,000.

School—Seattle. School Architect Edgar Blair is preparing plans for a four-room addition to the Warren Avenue school to cost $25,000.

IDAHO

High School—Wallace. Bonds for $55,000 have been voted for the construction of an additional high school building. A two-story brick building, 100x100 feet in size, is planned.

Store—Bonner's Ferry. J. W. Reid will erect a modern two-story brick department store with a thirty-foot frontage.

Business Block—Troy. W. M. Duthie will begin work soon on a modern two-story brick building 25x90 feet in size.

Elks' Building—Idaho Falls. The B. P. O. E. will build a $35,000 club house. Nels D. Porter is chairman of a committee to secure plans.

Elevator—Lewiston. Construction work on a grain elevator with 100,000 bushels capacity will be started at once.

School—Ilo. Bonds for $15,000 were voted by Independent School District No. 1 for building a modern school house.

School—Inkom. Bonds for $15,000 have been voted with which to erect a modern school building.

Court House—Moscow. An election will be held July 22 for the purpose of voting on a $110,000 bond issue to be used in the erection of a court house for Latah County.

Lodge Building—Boise. Architects Tourtellotte & Hummell have prepared plans for a four-story lodge building for the B. P. O. E.

BRITISH COLUMBIA

Hotel—Victoria. Architect Jessie M. Warren has plans completed for an eight-story hotel, 75x25 feet in size, for Adams Bros., to cost $50,000.

Hotel Addition—Victoria. Architect W. Ridgeway Wilson has prepared plans for alterations, to cost $10,000, to the Commercial Hotel.

Residence—Victoria. Architect W. F. Whitehead prepared plans for a $16,000 residence for T. G. McArthur.

Residence—Victoria. Architect A. J. Maclure has prepared plans for a residence at Gordan Head for a Mr. McGaffey.

Apartment House—Vancouver. R. J. Coleman will erect a three-story apartment house at a cost of $60,000 from plans prepared by himself.

Residence—Eburne. Architect R. A. Nicolais is preparing plans for a $100,000 residence to be built for a Vancouver capitalist.

Hotel—Brentwood Bay. Architect H. Horton of Victoria is preparing plans for a $75,000 hotel building for E. E. Phair.

Factory—Vancouver. The American Can Co. will start work at once on a five-story factory building to cost $85,000.

THE HALFTONES

IN THIS ISSUE

OF THE

Pacific Coast Architect

WERE MADE

BY THE

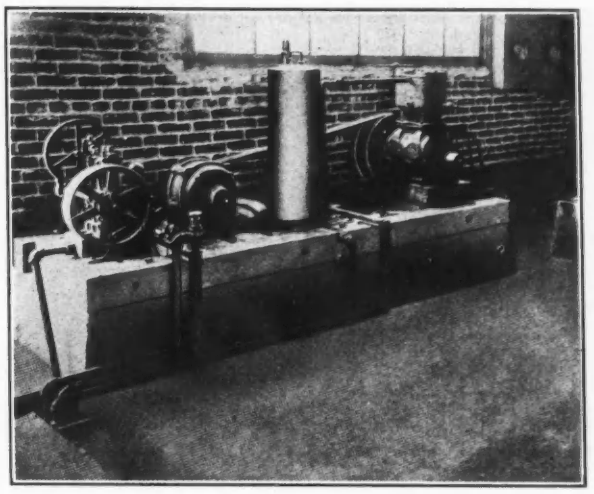
Oregon Engraving Co.

JOURNAL BUILDING

PORTLAND, OREGON

Specialists in

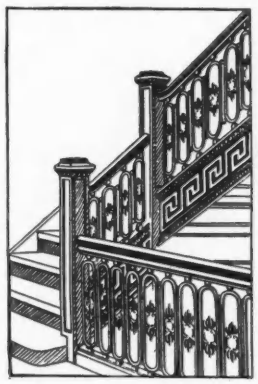
Oil Burning Equipment



ABBOTT FORRESTER COMPANY

332 Mohawk Building, Portland, Oregon

Telephone Marshall 2281



PORTLAND WIRE & IRON WORKS

BANK, STORE & OFFICE RAILING

ORNAMENTAL WIRE, IRON, BRASS & BRONZE WORK.

GRILL WORK FOR ELEVATOR ENCLOSURES, ELEVATOR CABS, STAIRWORK, BALCONY-RAILINGS, FIRE ESCAPES ETC.

PORTLAND, Oregon.

SECOND & COLUMBIA STREETS

TELEPHONES
Main 2000 A-2026

Northwest Steel Company

TELEPHONES: MAIN 4016; A-5319

Steel Beams, Channels, Angles, Tees, Bars, Universal Mill Plates, Tank and Flange Plates, Black and Galvanized Sheets

Fabricators of Structural Steel

Office, Works and Warehouse:

Foot of North Sixteenth St., Portland, Oregon

BERGER BROS.

Established 1877

Portland's Leading Decorators

Largest Dealers of

Exclusive Wall Papers

ON THE COAST

Special Line of Imported French Papers
From the Mills of
J. ZUBER & CO. AND DES FOSSE & KARTH
Decorative Schemes and Estimates Furnished
186 BROADWAY

Our Bureau of Interior Decorations

Is for the express purpose of assisting you in the selection of furnishings and decorations for your home.

This means—

To obtain the right color effect in wall coverings, draperies, rugs and woodwork.

To advise you in the purchasing and arranging of your furniture.

To make the interior of your home attractive and pleasing at the same expense as otherwise.

Write, or still better, call on us and our Mr. Drew will advise you to the best of his ability.

Bureau of Interior Decorations, Fifth Floor

Lipman Wolfe & Co.

VAN WATERS - COOK MFG. CO.

Manufacturers of the

HESTER SYSTEM

OF STORE FRONT CONSTRUCTION

Office and Factory

EAST ASH, CORNER SIXTH STREET

PORTLAND, OREGON

Phone East 1581

CO-RAN FRESH AIR BED

Stands half in your room and half out of doors

Combines Sleeping Porch and Indoor Bed Room. Keeps Bedding dry. Screened in. Wind, Rain, Fly and Mosquito-proof.

ABSOLUTELY SANITARY AND COMFORTABLE

416 Eilers Building, PORTLAND, OREGON

Phone Marshall 438

When You Visit San Francisco

TAKE THE TRIANGLE TRIP

Over the

NORTHWESTERN PACIFIC RAILROAD

In All the West This Trip Is Best

ONE OF THE MOST DELIGHTFUL SCENIC ONE-DAY JAUNTS IN AMERICA

150 miles of Mountain and Redwood Forest Scenery, a Boat Ride on San Francisco Bay and by Rail Along the Russian River

Leave San Francisco 8:45 a. m. daily and 6:45 a. m. Sunday only, by boat across the Bay of San Francisco, in full view of the Golden Gate to Sausalito (the Sorrento of America). Thence via picturesque San Rafael and thriving Petaluma (home of the chicken industry), through Sonoma Valley to Santa Rosa and Fulton. From Fulton, through magnificent mountain scenery and redwood forests and along Russian River, to Monte Rio. Return is made along the coast, passing Tomales Bay, Point Reyes, San Anselmo, etc., to Sausalito, arriving at San Francisco 7:35 p. m. daily the same evening.

If preferred, trip can be reversed, leaving San Francisco at 8:15 a. m. via the coast to Monte Rio and returning along the river and through the valleys, arriving at San Francisco 7:05 p. m. daily and 9:05 p. m. Sunday the same evening.

Round Trip Fare for Triangle Trip, $2.80; except on Fridays or Saturdays, it is $2.50, and on Sundays only $2.20.

Tickets on sale at 874 Market Street (Flood Building) and Sausalito Ferry Ticket Office, San Francisco, Cal.

Immediate Delivery

In Stock in Yard

Complete Line of Beams, Channels, Angles, Plates

STEEL

Construction and Castings

All Architectural Iron

Steel Post Caps
Sidewalk Doors

PACIFIC IRON WORKS

East End of Burnside Street Bridge

Portland, Oregon

J. C. Bayer Furnace Co.

Heating and Ventilating Engineers

AGENTS FOR THE NATIONAL SYSTEM OF AUTOMATIC REGULATION

HEATING AND VENTILATING OF PUBLIC BUILDINGS A SPECIALTY

Wholesale Dealers in

Registers and Boynton Furnaces

J. C. BAYER

Manufacturers of

Steel Ceilings, Skylights, Metal Windows, Cornices

Office:

204 MARKET STREET PORTLAND, OREGON

Mr. Architect and Engineer

WOULD YOU BE ABLE

To design an absolutely fireproof building if called upon today, not only efficiently, but by the most economic system?

If a client walked into your office at 9 o'clock this morning and wanted immediate information on the best construction possible, CAN YOU TELL HIM "RIGHT OFF THE REEL?"

Practically every fireproof building in Portland today is designed KAHN SYSTEM.

If you don't realize the many economic and efficient features of the KAHN SYSTEM, write us today and we will send you descriptive booklet containing valuable engineering tables. No architect's library is complete without them.

TRUSSED CONCRETE STEEL CO.

Dept. K.

1106 WILCOX BUILDING PORTLAND, OREGON

A. G. WHITEMAN H. B. SHOFNER

OREGON ART TILE COMPANY

We make a specialty of Artistic Fire Places and Mantels. Estimates furnished for Tile Floors, Bath Rooms, etc.

Designs Furnished on Application

PHONES: MAIN 3889; A-7323

Office and Show Room

413 ALDER STREET, PORTLAND, ORE.

KNIGHTS OF PYTHIAS BUILDING

Money to Loan

ON CITY *and* COUNTRY PROPERTIES

BY

G. GRAVEM

422 Chronicle Building

San Francisco, Cal.

Phone Douglas 3424

MT. DIABLO CEMENT

San Juan Lime
FOR PLASTERING

Imperial Lime
FOR BRICK WORK

HENRY COWELL LIME & CEMENT CO.
507-8 Railway Exchange Building
PORTLAND, OREGON
Phones: Marshall 2134; A-3220

Timms, Cress & Co.
(Incorporated)

Manufacturers Agents
and Jobbers

184-186 Second Street, Between Yamhill and Taylor
PORTLAND, OREGON

Herringbone Metal Lath
Painted, Galvanized, Ingot Iron

Self-Sentering Lath
For Partitions, Floor Slabs, Roofs and Ceilings

Diamond Mesh and Sheet Metal Lath

Hannon Metal Corner Bead

also a complete line of

Building Specialties

PAINTS AND PAINTERS' SUNDRIES

Compo Ornaments

WE DO
Modelling and Carving

WE MANUFACTURE
Staff, Composition, Cement Casts
Plastic Relief

J. D. Tresham Mfg. Co.
E. TENTH and LINCOLN STS. PORTLAND, ORE.
Telephone East 538

West Side Office 315 Couch Building
Phone Marshall 2577

Washington Brick, Lime & Sewer Pipe Company

Established 1888

Manufacturers of
ARCHITECTURAL TERRA COTTA

Glazed matt and standard, all colors, Face brick, plastic and dry press, all colors; Common brick, Fire brick, Fire clay, Sewer pipe, Partition tile, Tile coping, Mantel tile, Hollow Building blocks, Flue lining, Electric conduit tile, Chimney pipe, Chimney tops and White lime

General Office
Spokane, Washington

Portland
801-2 Lewis Building